Detailed Implementation Plan

August 2010

Cotopaxi, Ecuador Essential Obstetric and Neonatal Care (EONC) Project
Center for Human Services - Ecuador
USAID/Child Survival and Health Grants Program
Cooperative Agreement No. GHS-A-00-09-00008-00
September 30, 2009 to September 29, 2013

This report was produced for review by the United States Agency for International Development. It was prepared by the Center for Human Services and was authored by:

Dr. Jorge Hermida – Latin America Regional Director, CHS-URC
Dr. Kathleen Hill – HQ Technical Backstop – Senior MNCH QI Advisor, CHS-URC
Dr. Mario Chávez – Cotopaxi Field Program Manager, CHS-URC
Mr. Andrew J Gall – Latin America Project Coordinator, CHS-URC

Table of Contents

List of acronyms

AMTSL	Active Management of Third Stage of Labor
BCC	Behavior Change Communication
CHS	Center for Human Services
CHW	Community Health Worker
CSHGP	Child Survival and Health Grants Program
COMPAS	Parish Health Committee (in Spanish)
CONASA	National Council of Health of Ecuador (in Spanish)
EBAS	Basic Health Team (in Spanish)
ENC	Essential Newborn Care
EONC	Essential Obstetric Newborn Care
HCI	Health Care Improvement Project
IEC	Information, Education and Communication
IESS	Institute of Social Security of Ecuador (in Spanish)
KPC	Rapid Knowledge, Practices, and Coverage
LAC	Latin America and Caribbean Region
LBW	Low Birth Weight
LMGAI	Law of Free Maternity and Child Care (in Spanish)
MCHIP	Maternal and Child Health Integrated Program
MICC	Cotopaxi Indigenous Movement (in Spanish)
M&E	Monitoring & Evaluation
MNC	Maternal Neonatal Children
MNH	Maternal and Newborn Health
MOH	Ministry of Health
MOU	Memorandum of Understanding
NGO	Non-governmental Organization
QA	Quality Assurance
QAP	Quality Assurance Project
QI	Quality Improvement
SSC	Peasant Social Security (in Spanish)
TBA	Traditional Birth Attendant
TV	Television
URC	University Research Co, LLC
USAID	United States Agency for International Development

Section A: Technical Approach

PART 1: BRIEF PROJECT OVERVIEW

The USAID/CSHGP Cotopaxi, Ecuador Essential Obstetric and Neonatal Care EONC Project will be implemented in the Cotopaxi Province, a mountainous region in the central Ecuadorian highlands (see **Annex 12**). The Cotopaxi province, with 384,499 inhabitants, has a large rural population (67%), a third of which is Ecuadorian Indian (28%) and the majority of which is poor (90%) with poor access to and utilization of evidence-based maternal newborn services. The province contains 7 counties and 38 rural parishes. The project interventions will be implemented in 21 priority rural parishes that meet at least one of two selection criteria known to be associated with higher risk of maternal newborn mortality: a) > 50% of parish population lives in extreme poverty, b) > 40% indigenous Indian ethnic composition (see **Annex 14b** for a summary of selected project parishes, including population figures based in final selection criteria). The total number of project beneficiaries is 72,437 persons that include 44,345 women of reproductive age and 23,590 children under age 5. [1],[2] (See Table 1).

The CHS Ecuador CHGSP technical intervention area is focused exclusively on maternal newborn health. The overarching project objective is to improve household practices and build a provincial-level network of coordinated maternal newborn health services, strengthening linkages between levels of care (community, primary, hospital) and along the continuum of antenatal, intrapartum and post-partum care. The project seeks specifically to strengthen coverage, utilization, coordination and quality of community- and facility-based high impact, evidence-based services for mothers and newborns, with community services delivered by TBAs closely supported by health center staff and community organizations. Increased skilled care coverage is an important overall objective for the project.

[1] Consejo de Desarrollo de las Nacionalidades y Pueblos del Ecuador, CODENPE, Population Projection by Cantons & Parishes, by programming groups, Cotopaxi-Ecuador, 2008
[2] SIISE – INEC, 2004.

Table 1. Population of Women and Children in priority parishes of Cotopaxi, Ecuador EONC Project Target Area:

Beneficiaries	Population	Percent of Population
Infants: 0-11 months	4,502	6.22%
Children: 12-59 months	19,088	26.35%
Children: 0-59 months	23,590	32.57%
Women: 15-49 years	44,345	61.22%
Target Population	**72,437**	**100%**
Total Population	196,082	----

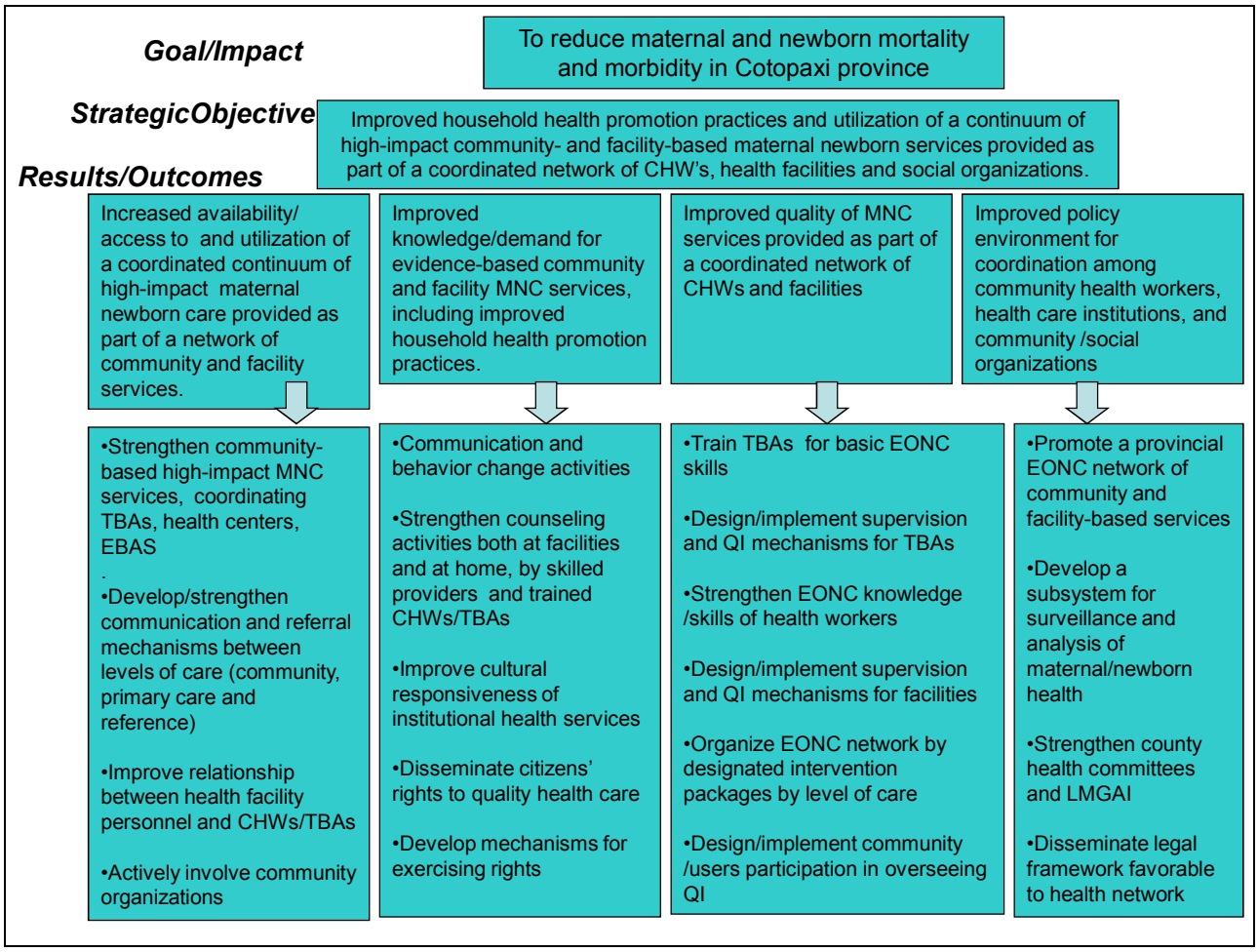
Source: INEC, Censo de población y vivienda (2001, projected to 2010)

***Selection of Intervention Parishes*:**

A review of the budget upon completion of the DIP technical work plan demonstrated the need to either reduce the technical scope of implementation activities or to reduce geographic coverage in light of budget constraints. A decision was made by the Ecuador CHS team to reduce geographic coverage in light of national morbidity and mortality statistics demonstrating a substantially higher burden of maternal newborn morbidity and mortality in specific parishes, linked to poverty and high proportion of indigenous Indian inhabitants. The baseline household survey results substantiated the much lower levels of skilled delivery and post-partum care coverage and utilization among indigenous Indian women. Thus, based on the above two factors, a decision was made to target parishes with a high burden of extreme poverty and with a high proportion of indigenous Indian ethnic citizens with the expectation that targeting these parishes would allow the project to have the greatest impact on service coverage, household knowledge, care utilization and maternal and newborn morbidity and mortality.

After consideration of the total budget available, it was decided to use two selection criteria for choice of parishes: 1. > 50% of parish population lives in extreme poverty, 2. > 40% indigenous Indian ethnic composition. The Table in **Annex 14b** highlights selected parishes using identified selection criteria. The proposal and rationale for targeting specific parishes was discussed with USAID during a review of the DIP.

PART 2: RESULTS FRAMEWORK

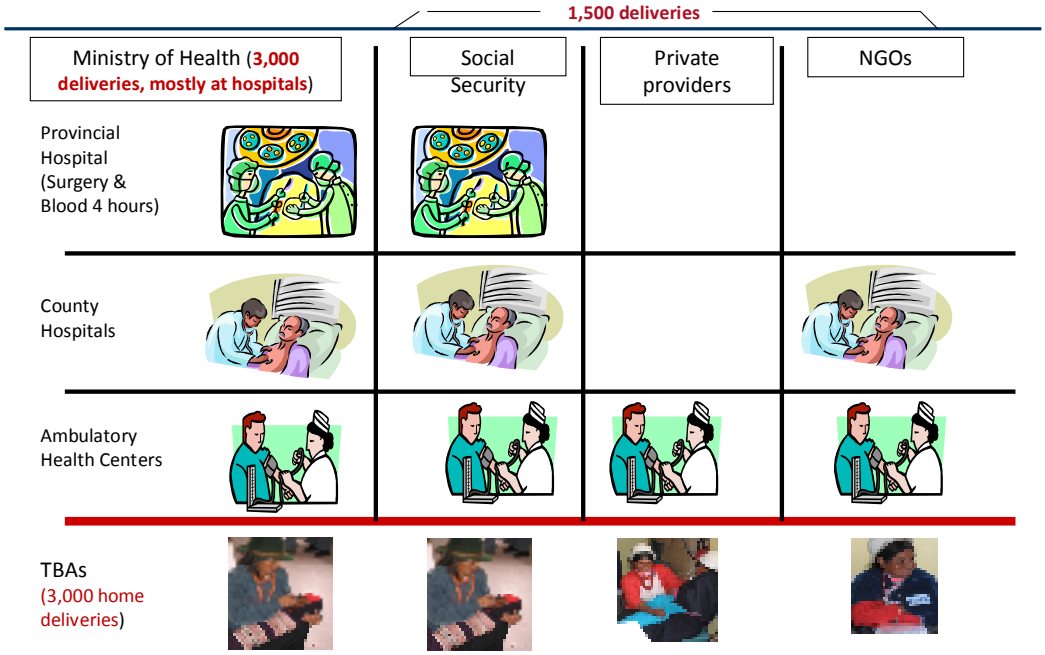


PART 3: KEY STRATEGIES AND ACTIVITIES

***Result/Outcome 1:** Increased availability, / access to, and utilization of a coordinated continuum of high-impact maternal newborn care provided as part of a network of community and facility services.*

Current status: The maternal mortality ratio in Cotopaxi province in 2008 was 102 per 100.000 live births, and the newborn mortality rate was 7.8 per 1.000 lb.[3], among the highest of Ecuador's provinces. The main providers of care are the Ministry of Health (MOH), with 45 health centers and 6 hospitals; the Social Security Institute (IESS) with 6 clinics and one hospital; and the Seguro Social Campesino (SSC) with 38 health centers. There are also 12 private facilities, all urban. Almost all MOH, IESS and SSC facilities offer obstetric, newborn and child health services. However, lack of coordination among individual facilities and institutions results in duplication of efforts, inefficient use of resources and large variations in quality of care. A pictorial model of the Cotopaxi health system is represented below. There is scarce coordination of services across health system levels or even among facilities within a single level of the system.

Baseline Cotopaxi Province Health System: Fragmented; no continuum of care; inequitable access; poor quality of care



[3] Anuario de estadísticas vitales del INEC 2008

Almost all rural communities in Cotopaxi have TBAs who attend deliveries4. The MOH provincial office maintains a list of 268 active TBAs, with nearly half of them participating in activities organized by the provincial MOH. It has been difficult however to obtain a definitive accurate number of current TBAs participating in MOH activities in Cotopaxi.

CHWs that work in the highlands are recognized by communities and health center staff as distinct from TBAs. In general CHWs, called "promotores", engage in community health counseling focused on a broad range of topic areas focusing on health promotion (e.g. hygiene, nutrition, immunization) and illness prevention and care. CHWs are usually male and unlike TBAs do not provide direct maternal newborn services in the home or community.

The national Department of Intercultural Health of the MOH is currently leading an initiative to develop a national official policy that establishes the role of the TBA in the public health system. In 2008, the MOH launched a new health care extension program named "Basic Health Teams" (EBAS in Spanish), as part of a new model of care to expand coverage of high-impact services from primary health centers to the community. The EBAS teams, based out of parish health centers, consist of a general physician, nurse and auxiliary nurse. The main responsibility of the EBAS team is to extend coverage of parish health center services through a structured program of home visits. The program is funded by the national government.

According to the National Survey on Maternal and Infant Health (ENDEMAIN 2004), 46.5% of all women delivering in Cotopaxi in 2004 had a home-based delivery[5]. Among indigenous women, however, 71.43% of women delivered at home assisted by a traditional birth attendant (TBA), reflecting a much higher percentage of home birth among indigenous communities[6].

The results of the project KPC baseline survey mirror the 2004 ENDEMAIN results (KPC report). Project results demonstrate significantly lower coverage of antenatal, skilled delivery and early post-partum services among indigenous Indian respondents than among non-Indian respondents (mainly Mestizo). For example, 49% of Indian mothers reported receiving 4 or more antenatal sessions with their last pregnancy as contrasted with 77% of Mestizo mothers; 36% of Indian mothers reported a facility birth while 89% of Mestizo women reported a facility birth. The main reasons reported for

[4] Sistema Integrado de Indicadores Sociales del Ecuador – SIISE y CODENPE, Primera Encuesta Nacional a las Comunidades de las Nacionalidades y Pueblos del Ecuador – ECONAP, 2002.

delivering at home in the baseline survey included "tradition" (37%), geographical barriers (18%) and "not enough time" (23%) which is possibly related to long distances. Lack of money for related expenses was only 6%. According to the results of an informal qualitative survey of TBAs, as part of the baseline, one of the principal reasons why pregnant women prefer to give birth at home is the mistreatment that women receive in health centers.

Project baseline survey results demonstrate low coverage of home-based early post-partum care across the entire population of respondents, with only 10% of women reporting a home-based early post-partum visit within first 48 hours of birth. The household survey was not able to assess quality and timing of *facility-based* early post-partum care which is currently being assessed.

A preliminary qualitative focus group with a sample of TBAs from a range of parishes in the Cotopaxi province revealed that many TBAs visit women on the day following their delivery, but some TBAs are not comfortable performing more than one post-natal visit due to concern that this could be interpreted by the mothers as interest in receiving some type of remuneration.

The TBA focus group further highlighted a lack of recognition of the work that TBAs do by MOH facility providers as perceived by TBAs. TBAs interviewed highlighted the lack of any standard referral processes between TBA and facility services. According to TBAs interviewed, MOH facility health personnel do not respect the TBA referral forms recommended by MOH provincial Cross-Cultural Health ("Salud Intercultural") guidelines.

Qualitative evaluations, in progress, of TBAs and facilities reveal gaps in trust, communication, and coordination between rural communities and facilities and between the TBAs s who serve these rural communities and the skilled providers in parish primary health centers. These gaps are geographic, economic, cultural and organizational in nature. Indigenous communities maintain a set of beliefs and practices, most inherited from their pre-Hispanic ancestors (mostly Panzaleo) that often conflict with the way health care services are provided in facilities. Because TBAs and herbal healers are often the only accessible providers in rural communities, such communities have both limited access to and often a general lack of confidence in facility-based maternal newborn services. An additional organizational barrier to skilled delivery coverage is the lack of established referral processes between community, ambulatory health and hospital which is not limited to TBA and ambulatory health clinic services. Indeed, the majority of county and provincial hospitals do not have functioning effective referral processes. The status of referrals and linkages between TBAs and health centers and between lower level and high level facilities is currently being assessed by the project to guide implementation activities.

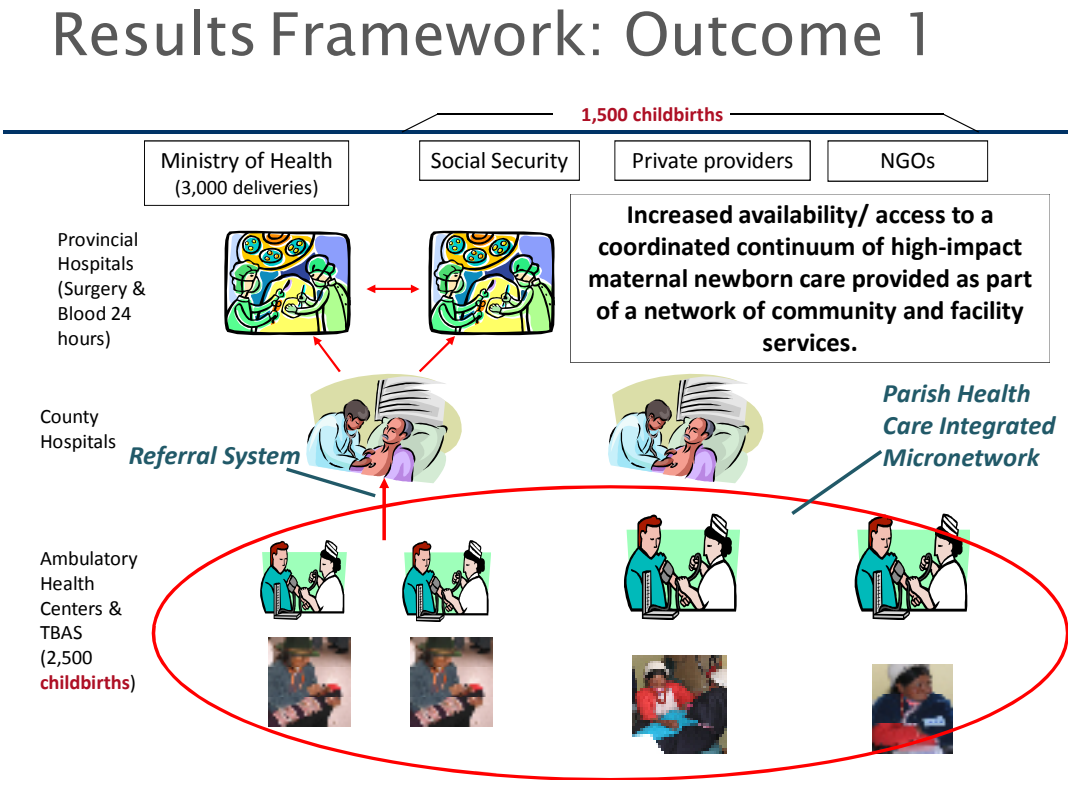
Strategies and key activities:

1.1 Strengthen community and home-based high-impact MNC services including coordination of such services with facility-based MNC services:

To increase availability and access to high impact MNC interventions at both community and primary health center levels, the project will promote a parish-level model of care (Parish Health Committee, or CONPAS for its Spanish acronym –Concejo Parroquial de Salud) - in each project parish. Individual County parishes will be phased into the project on an annual basis, beginning with Pujili County parishes in Year One, and phasing in additional counties and their respective parishes in each subsequent year (**See Annex 1, Workplan**). A parish CONPAS team consisting of the parish health center doctor and auxiliary nurse, the parish EBAS team, selected TBAs, other local providers as existent and parish government and community representatives will be formed to provide overall guidance and oversight to parish level maternal newborn health activities supported by the project.

On each CONPAS team, a designated "parish health micro-network" consisting of representative TBAs, EBAS members and facility skilled providers, will be responsible for planning and providing a coordinated and integrated package of high-impact MNC interventions across community, home and facility levels. The parish community-facility MNC package of services will include: counseling and BCC activities, including promotion of birth preparedness/complication readiness planning at household and community level; early recognition of danger signs and prompt care seeking for danger signs in *all* women; early skilled care-seeking for women with known risk factors such as prior cesarian or history pre/eclampsia; safe delivery and immediate post-partum practices; Essential Newborn Care (ENC); early home or facility-based post-partum care for mother and newborn including supportive counseling; recognition of danger signs and appropriate referral and support for accessing appropriate level of skilled care when indicated.

The pictorial graphic below depicts the key features of the intended changes to the Cotopaxi health care system: a parish-based micro-network of services integrating TBAs and health centers of the MOH and IESS as well as private providers and institutions managed by a "Parish Health Council" (or CONPAS) and a functioning referral system that coordinates and links care between levels of the system (community, ambulatory and hospital) and among institutions and private providers within each level.



The parish CONPAS team will support the coordinated delivery of the designated package of MNC community, home and facility services, including evaluation of community needs; tracking of pregnant women and newborns in parish communities; coordination and support of coordinated service delivery at home and facility level; support for continuous quality improvement; coordination with local organizations including county health council, municipal free maternal law users, and community organizations. A Junta Parroquial delegate (local elected government) and selected delegates from parish community organization will also be members of the parish CONPAS team. Parish health teams will meet on a monthly basis, with in-depth quarterly meetings to review priority project activities and indicators for continuous improvement. Project and MOH staff will support quarterly Parish Health Team meetings to build capacity to meet project priorities as closely defined with provincial MOH staff.

The project will actively reach out to engage private stakeholders working in project areas to participate in all project activities, including participation on parish-level CONPAS teams. For example in the Pujili county where activities have started in year one, a private not-for-profit mission hospital is actively collaborating in clinical training of providers in the county as part of project activities.

A specific strategy and work plan to promote active engagement of private providers and institutions and local NGOs will be developed in each province as the project begins activities in that province. Special emphasis will be placed on trying to engage private stakeholders in county-level planning and implementation of maternal newborn referral protocols. However, the project will not have the authority to mandate participation by private providers.

1.2 Develop/strengthen communication and referral mechanisms between levels of care (community, primary care and reference):

A year one TBA and facility assessment is currently underway to evaluate linkages and referral processes between maternal newborn services provided at distinct levels of health system (community, ambulatory, hospital). After analysis of TBA and facility assessment results, the project will review MOH referral protocols and tools to make recommendations for more effective referral processes between community, home, primary health center, county and provincial hospital services to promote more efficient access to the appropriate level of care for individual patients with specific needs, and especially for mothers and newborns with complications. The CONPAS team consisting of TBAs, skilled providers, community organization and elected government representatives will play a primary role in implementing recommended referral processes, supportive tools and monitoring mechanisms with parish TBAs and ambulatory health center staff. County MOH and hospital staff working in collaboration with parish ambulatory health center staff will oversee implementation of recommended referral/counter-referral processes between parish health centers, county and provincial hospitals.

The project will support bi-annual to annual parish-level "referral workshops" with skilled providers and TBAs, and county-level "referral workshops" with county hospital and parish health center staff to address referral processes, near misses, and maternal and newborn deaths. The project will support an annual meeting of county and provincial hospital representatives to support improved referral processes between county and provincial hospitals

The project will also support communities in targeted parishes to develop innovative approaches to overcoming key access obstacles to higher level care for women and newborns with complications, including emergency transportation mechanisms, such as the possible creation of community funds to pay for use of emergency vehicles and other associated costs.

1.3 Improve relationship between health facility personnel and TBAs:

Given the significant barriers posed by lack of trust and communication avenues between TBAs and facility providers, the project places a high priority on promoting more frequent and positive communication between TBAs and skilled providers. The new government-endorsed EBAS teams offer one "bridge" opportunity for strengthening linkages between TBAs and facility personnel. The project will work where possible with EBAS teams to reach out to TBAs in extending facility care to homes and the community and to generally strengthen coordination between TBA home and facility services. Due to the weaker functioning of the EBAS system on the ground that originally envisioned, the project proposes the Parish Health Team as the primary venue for strengthening communication between community and facility providers.

Through established CONPAS teams, the project will promote regular meetings between TBAs and facility-based personnel to discuss advantages and barriers to strengthening coordination between skilled providers and TBAs for improved access to and quality of care. The project will support CONPAS teams to actively address key logistical barriers to TBA coordination with facilities, such as the provision of room and board for TBAs who bring patients to the parish health center or hospital and a defined role for TBAs in facility deliveries according to guidelines developed jointly by TBAs and facilty personnel. In previous work carried out by QAP and HCI in Ecuador with TBAs, we have seen that most TBAs are willing to work in coordination with local hospitals and facilities, but do not know how to overcome the many obstacles to coordination such as rejection by facility-based personnel, blame placed on TBAs when bringing a complicated patient to a facility and lack of funds to pay for transportation, lodging and food when TBAs accompany a patient with complications to a facilityl[7]. TBAs are in fact providing a sizable portion of obstetric and newborn care in Cotopaxi, and our project will work to integrate them into the EONC network with their own role, appropriate to the needs of the patients and facilities.

[7] *Operations Research Study Draft Report: Cultural Adaptation of Delivery Care in Ecuador.* The Quality Assurance Project and the Health Care Improvement Project. Ecuador, 2009.

1.4 Actively involve community organizations and parish government:

At the parish level, the CONPAS team will include members of local indigenous parish community organizations, as well as other relevant social organizations that might be in place such as women and youth associations. The CONPAS will be led by a member of the Junta Parroquial who is in charge of health issues in the parish. The CONPAS will meet monthly to receive a verbal report from the health care team (health center staff and TBAs) and to discuss health issues. The indigenous organization will represent the interests of the users of health services, advocating for access and quality of care, and providing oversight and support to the health team for their work with the communities. The Junta Parroquial delegate will represent the elected government and will provide oversight, advocacy and support for achieving national, provincial and parish government health goals. The health team represents all cadres of providers of community, home and facility maternal newborn health services (promotion, preventive and curative), including MOH, Seguro Social Campesino and Community Health Workers/TBAs.

Role of key partners:

The provincial office of the MOH, via the provincial Departments of Intercultural Health and Maternal/newborn Health has participated actively in finalizing the project work plan and will continue to participate in management, implementation and evaluation activities. The project will place a high priority on coordinating the project workplan with the MOH provincial workplan to ensure maximal alignment of project activities with provincial MOH priorities and activities. Members of the CHGSP staff met on May 26-27 with MOH provincial staff to present and coordinate the project workplan with the provincial MOH workplan and will continue to meet regularly with provincial MOH staff to provide updates and solicit feedback. Representatives of the Seguro Social Campesino (SCC) will participate on CONPAS teams in parishes with SCC facilities. As mentioned above, representatives of established parish community and social NGO's or other organizations and delegates from Juntas Parroquiales will actively participate on parish CONPAS teams to ensure that key partners are actively represented and in a position to contribute ongoing support and oversight of project activities.

Result/Outcome 2: Improved knowledge of and demand for evidence-based community and facility MNC services, including improved household maternal newborn health promotion practices.

Current status:

In general, project baseline survey results demonstrate mediocre frequency of high-impact maternal newborn household practices and levels of reported antenatal and post-partum counseling. For example, only 57% women recalled any birth preparedness counseling and only 54% reported at least 2 birth preparedness actions during their last pregnancy. Only 63% of mothers were able to cite at least two pregnancy danger signs; only 50% of mothers were able to cite two delivery danger signs; and only 60% of mothers were able to name at least two danger signs for a mother or for a newborn in the post-partum period, despite the fact that danger sign recognition is an essential pre-requisite to prompt care seeking for life-threatening conditions.

With regard to high-impact household practices, only 45% of respondents reported giving a food or liquid other than breastmilk prior to their child reaching 6 months of age. Forty eight percent of mothers reported using a modern contraceptive method although 80% cited two-years as a desirable time to space pregnancies, meaning that access to an effective method rather than knowledge may have been a key barrier.

In general the project baseline survey demonstrates low levels of knowledge about the optimal timing of high-impact post-partum care. Twenty-five percent of all mothers stated that postpartum care for mother and newborn should occur in the first 48 hours after birth, with 44% of respondents stating that post-partum care should occur three weeks or more after birth.

One of the important obstacles to demand for and access to skilled care in Ecuador in addition to geographic, transport and financial obstacles, is the cultural gap between care provided in facilities and care provided in the patient's home. Many maternal and newborn deaths in fact occur in villages located in close proximity to parish health centers and hospitals. In recent national surveys[8], mothers affirm that among the main reasons why they prefer to give birth at home, as opposed to a facility, is the way in which childbirth care is provided in the home by TBAs. Home birth factors that mothers prioritize include: active presence of a family member during delivery; use of traditional teas or foods; personal choice of delivery position; room temperature and clothing; choice of lighting; emotional support; presence of non-threatening TBA provider or family member assistant as opposed to the authoritarian behavior of doctors and nurses in facility deliveries, and an overall sense of the delivery being not mainly a "medical event" but rather a socially significant family and community event.

[8] ENDEMAIN Survey 2004. Op. Cit.

Strategies and key activities:

2.1 Communication and behavior change (BCC) activities

The overarching project BCC strategy aims to increase household knowledge of and best practices for maternal newborn health promotion, skilled care seeking, danger sign recognition and prompt and effective care-seeking in the event of complications.

In close collaboration with Cotopaxi MOH, the project team is developing a comprehensive BCC strategy (anticipated fall 2010) that includes three broad categories of activities: 1. IEC activities through mass media (radio/television); 2. BCC activities anchored primarily in counseling during home-based delivery and post-partum services and facility-based antenatal, intra-partum, and post-partum counseling. 3. IEC/BCC community-level activities, including parish-level maternal-newborn fairs and discussion groups.

In preparing the comprehensive BCC strategy, the team and MOH counterparts are closely reviewing results of KPC household assessment as well as formative research results of 6 focus groups with households and TBAs and 47 structured interviews with TBAs (report pending) to define priority areas for focus.

Quality of counseling will be a strong focus of training and supervision of TBAs to meet BCC objectives. A structured TBA training curriculum is being developed that emphasizes capacity building for counseling that includes inter-personal counseling skills as well as evidence-based content focused on routine care maternal newborn practices and danger sign recognition and prompt care-seeking.

IEC media campaign activities will draw on established CHS experience in Ecuador and will include a range of media communication activities in both Spanish and Quechua (indigenous language in Cotopoxi province), including: local radio and TV jingles and soap-operas; focus groups with pregnant women; distribution of printed user-friendly brochures; promotion of key messages during community meetings, "local theater" productions, local "health fairs" and puppet theaters and other activities as relevant.

Available IEC and BCC materials, including MOH, established CHS, local NGO and international partner materials, are being closely reviewed for final selection. BCC materials will include counseling posters for use during household post-partum visits and facility antenatal, intrapartum, and post-partum services, and job aids for TBAs and CHWs that are designed to support counseling curriculum/counseling posters.

All IEC and BCC activities will reinforce a simple set of core messages related to maternal newborn health promotion (e.g. breastfeeding), prevention (e.g. keeping newborn warm) best practices, danger sign recognition and prompt skilled care seeking for women and newborns around childbirth, including the importance of antenatal care, skilled delivery care and early post-partum care.

Emphasis will be placed on messages that increase the capacity of community members to identify risk factors and danger signs for pregnant women, mothers and newborns. Messages will also aim to support intra-family processes for birth preparedness and complication readiness, including practical suggestions for overcoming common transportation, financial and cultural obstacles to accessing skilled care. Messages will also educate women and families on specific civil rights they are entitled to, including laws that support these rights such as access to State-paid health care, municipally-paid transportation in case of an emergency, family planning at no cost and other benefits financed by public taxes such as those covered by the Free Maternity Law.

2.1 Strengthen counseling activities in community, home and facilities by skilled providers and trained TBAs and CHWs:

The baseline household survey demonstrates the important gaps in household knowledge and practice of best maternal newborn practices. Strong emphasis will be placed on improving the systematic provision and quality of TBA and skilled provider counseling as part of antenatal, intra-partum, and post-partum services. Emphasis will be placed on improving both technical content and interpersonal variables critical for effective counseling. Antenatal counseling will specifically include ongoing counseling for the development of a Birth Preparedness Plan to be developed by the family with the support of the provider[9]. Individual birth preparedness family plans will include advance discussion and decision making about what the family will do in the case of an emergency health situation for either the mother or the newborn during the antenatal, intra-partum or post-partum period, including: danger signs for mother and newborn, where to go, how to get access to transport, how much money will be needed and how to cover the costs, who will accompany the mother, who will help at home while the mother is away. The project will actively coordinate media outreach, TBA and skilled provider counseling and community emergency planning activities for maximum impact. Training and supervision of TBAs and skilled providers will include a strong focus on performance-based counseling skills, using both peer to peer and direct provider-client role-plays for both training and ongoing supervision of counseling quality. In addition, monitoring of clinical quality of care in facilities will include counseling as part of a compound clinical care process indicators.

[9] USAID/Calidad en Salud Guatemala. Ministry of Health. *Guidelines for Developing Family and Community Emergency Plans.* Guatemala, 207.

Because of the limited involvement of CHWs in home-based maternal newborn services and counseling, project activities will be targeted primarily at TBAs. As such, TBAs will be the focus of training, supervision and ongoing capacity- building. However, the project is exploring the possibility of doing focused training with CHWs where appropriate to build capacity of CHWs to advocate for skilled care utilization and prompt care-seeking for complications and to include healthy maternal newborn practices as part of general CHW counseling.

The specific strategy for inclusion of TBAs and CHWs will be developed in each parish as part of a 3-step process that includes: 1. Formation of a parish health council (CONPAS team); 2. Development of a parish-specific health plan by the council for implementation of project activities including involvement of individual TBAs and CHWs; 3. A parish provider training plan that includes TBAs, CHWs, and skilled providers using project training materials. As part of the parish training plan, the parish health council will consider how best to target specific TBAs and CHWs in that parish.

2.1 Improve cultural responsiveness of institutional health services

Our project will implement previously tested methods to improve the cultural responsiveness of hospital and facility services to increase utilization of skilled care services by rural communities.

The QAP and HCI projects worked with the MOH in recent years to implement a successful method to improve cultural responsiveness of childbirth care in five county hospitals in several provinces[10]. The tested method, which will be replicated and improved in our project, brings together facility personnel, TBAs, local municipal government representatives and mother representatives from nearby communities , to form a team that identifies and supports implementation of successive changes in obstetric and newborn care practices that incorporate cultural elements that are demanded by communities and TBAs. Representatives of the parish-level CONPAS teams and the county health council will coordinate activities to increase the cultural responsiveness of care in county facilities. Recent CHS data suggests that community and TBA-driven changes to make facility-based care more responsive to women's priorities increase both client satisfaction and skilled care utilization in participating facilities. . The MOH has harvested key lessons of the prior intervention in a recently published national "Guide for the provision of culturally appropriate delivery care in MOH facilities in Ecuador"[11], with

[10] González Daniel. *Manual for Humanization and Cultural Adaptation of Delivery Care.* (In Spanish) For The Quality Assurance Project, QAP. Dirección Provincial de Salud del Tungurahua and Family Care International/Ecuador. Quito, 2005.
[11] Ministry of Health of Ecuador. *Guidelines for providing culturally adequate delivery care.* (In Spanish), Quito, 2008.

support of our sister projects QAP and HCI. This document will be used to leverage support for and guide county and parish health team support of activities under this result.

2.1 Disseminate citizens' rights to quality health care

The new Constitution approved two years ago in Ecuador declares access to quality health care as a constitutional right to which all Ecuadorians are entitled as stated in the National General Health Law. The law grants the national government responsibility for enforcing citizens' right to quality health care via an integrated public health system under the stewardship of the MOH. There are several oversight mechanisms established to ensure compliance with the law, including Free Maternity Law Users' Committees (at county level), County and Parish Health Councils and Citizens' Oversight Groups. The project will actively support these designated oversight committees in addition to community organizations that may exist and wish to play an advocacy and enforcement role. In addition, project media campaigns will disseminate messages to raise awareness of the Free Maternity Law and the national General Health Law. In year two, interventions may be explored at the facility level to promote facility compliance with established health care laws.

Role of key partners:

CHS has a well-established working relationship with the Cotopaxi provincial MOH to promote maximal coordination of project BCC objectives with provincial MOH BCC programs. CHS will continue to work closely with the provincial MOH Department of Intercultural Health to expand the cultural responsiveness of facility care intervention in provincial facilities as part of the project. We expect to establish a working relationship with and to actively coordinate with the indigenous organization MICC (Cotopaxi Indigenous Movement) that manages the local TV station that broadcasts in the Kichwa language. CHS will work closely with Maternity Law Users' Committees (at county level), County and Parish Health Councils and established Citizens' Oversight Groups in targeted parishes.

Result/Outcome 3: Improved quality of MNC services provided as part of a coordinated network of CHWs and facilities

Current status:

Although data on quality of parish health center (as opposed to hospital) and TBA antenatal, birth and post-partum services is scarce, preliminary assessment by our project suggests that parish health centers are/are not providing early post-partum services nor a visit to newborns in the first 48 hours after delivery. Likewise preliminary qualitative data obtained through focus groups with TBAs, suggests that TBAs have low awareness of danger signs in the postpartum period and for the newborn, lack materials and training to conduct consistent and routine counseling, and are not consistently referring

complications or emergencies towards health centers nor hospitals, in part due to a lack of standardized referral processes and poor relationships with skilled providers in parish health centers. Baseline KPC results demonstrating low reported frequency of birth preparedness counseling (57%) suggests that neither TBAs nor skilled providers are routinely providing birth preparedness counseling as part of routine antenatal care. Likewise, the low levels of danger sign knowledge and knowledge of timing of post-partum care demonstrated in baseline survey suggest a low quality of counseling that may be related to lack of high-impact content and/or effective interpersonal communication.

With support from the HCI project, quality improvement teams currently operate in all 6 MOH hospitals (Latacunga, Salcedo, Pujilí, Saquisilí, La Maná and El Corazón) in the Cotopaxi province, as part of a larger cooperation in recent years between HCI and the MOH to improve hospital-based quality of maternal and newborn care in near half of Ecuador's provinces, one of them Cotopaxi. Hospital QI teams assess monthly compliance with routine and complications care standards for antenatal, intrapartum delivery and postpartum care via a structured audit of clinical records. Teams implement rapid improvement activities to address identified quality gaps based on data collection and analysis of monthly results. Monthly reports go to the provincial MOH office. In Cotopaxi, this previously existing initiative has achieved good quality levels in antenatal, immediate post-partum maternal (AMTSL) and newborn care that has reached near 70-90% compliance with standards, while compliance with case-management of maternal and newborn complications such as preeclampsia, hemorrhage, sepsis, premature rupture of membranes, preterm birth, low birth weight (LBW), asphyxia and newborn sepsis continues to lag at 50-80% compliance with designated standards. The CHSGP project will build on these achievements and will focus on expanding the approach to ambulatory health centers, TBAs and non-MOH providers, as well as on maternal and newborn complications care at all levels of the provincial system. We will also work with the provincial MOH to increase their capacity to manage quality improvement, where there persists a weak capacity to analyze hospital level indicators and to respond to identified quality gaps. There are no provincial-level indicators or data on the quality of childbirth care provided by TBAs or in ambulatory health centers.

Although a considerable number of TBAs have been trained by the provincial MOH in past years, preliminary baseline focus groups with TBAs reveal that such training appears to have focused primarily on clean delivery, with no recent follow up training or supervision mechanisms.

Strategies and key activities:

4.1 Train and supervise TBAs for basic EONC skills

The project will develop a structured and phased training and supervision strategy to build TBA skills for high-impact antenatal, birth and post-partum care. Specific TBA skills that the project will prioritize are summarized in Table 2 below. Training will employ competency-based methods using simulation, role plays, and real patients when

appropriate. Newborn and pelvic mannequins will be used to develop hands-on skills, especially for more complex tasks such as management of newborn asphyxia and early identification of uterine atony, a leading cause of post-partum hemorrhage. The training strategy will prioritize routine counseling and care as well as danger sign recognition, assessment of newborn, and prompt referral for identified danger signs or complications. TBAs will be trained to provide a structured early post-partum home visit within 48 hours of birth regardless of whether delivery occurred in home or facility. Adapted and standardized IEC materials will be used in association with a standardized training curriculum. The training strategy, summarized in **Annex 8** promotes phased skill-building of successive waves of TBAs using high-performing TBAs as mentors, assistant trainers and supervisors of peer TBAs over the life of the project. PendingMOH approval of the MOH, the project may explore task-shifting to TBAs for provision of routine services to women out of access of health centers and EBAS teams, using simple technologies such as urine dipsticks with color-coded results for pre-eclampsia screening and possible blood pressure monitoring with a digital sphigmomanometer.

Table 2: Specific TBA EONC Skills for Home-based Maternal Newborn Services

	Antenatal care	Labor and Delivery Care	Early Post-partum Visit (within first 3 days)
TBA	Referral facility-level antenatal services; Nutritional counseling; pregnancy danger sign recognition and referral; Birth preparedness & Complication Readiness <u>Note:</u> *It is not anticipated that TBAs will provide a substantive degree of antenatal services as part of the project but rather will promote utilization of skilled facility-based antenatal services.*	Recognition of prolonged labor; Clean delivery (hand washing; clean blade); Immediate drying and wrapping; fundal massage of uterus after delivery of placenta; BF within one hour; cord care for newborn; danger sign recognition and referral for mother and newborn; avoidance of harmful practices. <u>Note:</u> *Project staff are working closely with global Helping Babies Breathe (HBB) activities and may consider introduction of home-based resuscitation training for TBAs at some point in project*	Exclusive BF; thermal and cord care counseling; nutritional counseling for mother and newborn; recognition/referral for maternal and newborn danger signs, including basic assessment of newborn and mother; avoidance of harmful practices. Birth spacing/FP counseling (including LAM) and referral for modern FP methods.

The project does not plan to provide direct payment to TBAs for their work. However the project will incentivize the participation of TBAs in training workshops and monthly CONPAS meetings through a modest stipend for transportation, lodging and meal costs when TBAs must travel to meetings and training sessions. During focus groups with TBAs as part of formative research, TBAs indicated that they would be willing to participate in project activities with modest incentives for participation in monthly or bi-monthly meetings and trainings.

4.1 Design/implement supervision and QI mechanisms for TBAs

Adapting QI methods proven to work well with facility-based personnel, CHS will adapt standard tools to assess, improve and monitor the quality of TBA services. Methods successfully used by CHS in the past will include direct observation when possible using checklists; simulations using mannequins or actor-patients using checklists; role playing and structured verbal questionnaires and case studies (for non-literate TBAs). In addition, we will develop supervision tools and simple methods for monitoring quality of TBA services for use by facility-based personnel and EBAS team members to supervise the work of the TBAS, applying the concepts and approaches of facilitative supervision.

4.1 Strengthen EONC knowledge /skills of health workers

The MOH recently published a Manual of Quality Standards and Indicators providing detailed guidelines for the application of evidence-based high-impact maternal newborn interventions in Ecuador's facilities. [12].[13]. The USAID QAP/HCI project and the MOH have successfully created pilot provincial EONC training centers based in three provincial hospitals. This model will be used to implement training of skilled providers as part of the project. In this sustainable, locally resourced training model, MOH-paid Ob-Gyn and Pediatrician hospital-based specialists previously trained by our project become trainers for facility-based personnel in the province. The training is competency-based in orientation using hands-on mannequins, simulations and real-patient experiences. Tested training modules developed by QAP and the MOH are available for immediate use for project skilled provider training activities[14]. This approach to EONC training is practical and low-cost, since trainers do not charge added costs other than their regular MOH-paid time. In addition, CHS will continue to promote the use of USAID/HCI's webpage www.maternoinfantil.org which has had more than 27,000 visits in its first year of existence and is becoming a strong and practical web-based resource tool for evidence-

[12] Manual de Estándares e Instrumentos para medir la calidad de la atención materno-neonatal. Ministerio de Salud Pública del Ecuador. CONASA. Quito, Agosto 2008.
[13] *Normas y Protocolos Materno y Neonatal.* Ministerio de Salud Pública del Ecuador. CONASA. Quito, Agosto 2008.
[14] Ministry of Health of Ecuador , and the Quality Assurance Project, QAP. EONC Training Modules. Quito, 2007.

based clinical practices and successful implementation strategies for translating best practices into action in facilities and communities.

4.1 Design/implement QI mechanisms for facility-based EONC

We have learned that training, even if it is of good quality, is not enough to improve and sustain quality of care. We will implement a modern QI collaborative approach, the Improvement Collaborative, to ensure continuous monitoring and improvement of the quality of EONC care in Cotopaxi province facilities Within each health center and hospital of the MOH, IESS and private hospitals, we will train CQI teams in QI and monitoring methods to improve and track quality of care processes and to overcome obstacles to quality care. Facilities of a similar level (e.g. parish health centers) will monitor a common set of quality indicators. Monthly reports on indicators of compliance with standards will allow the provincial MOH and the project to identify low-performing facilities and to prioritize coaching and supportive supervision visits for such facilities. QAP and HCI have collaborated with the MOH to implement this approach successfully in half of Ecuador's provinces.[15].[16]. Facility-based QI teams will identify operational obstacles to implementing standards and will test changes to overcome obstacles for the routine delivery of standards-based care. Facility QI teams will participate in quarterly Learning Sessions where they will share their improvement experiences and learn from each other. Over time, successful changes to common deficiencies in care processes will be identified and institutionalized throughout the provincial EONC network.

4.1 Design/implement community /users participation in overseeing and supporting QI

The role of community and users as advocates and overseers of continuous improvement and sustained quality of care is highly important in public health systems where the possibility of economic incentives is minimal or non-existent. We will support the formation, strengthening and participation of User Committees and Parish Health Councils (CONPAS) to regularly review quality assessments, analyze problems, and advocate for improvement initiatives at community, health center and hospital levels. Specific activities will include the development and testing of mechanisms and instruments for User Committees and Parish Health Councils to exercise a role in overseeing and supporting quality improvement activities, as well as training and follow-up support during their ongoing activities.

[15] USAID Health Care Improvement Project. 2008. The Improvement Collaborative: An Approach to Rapidly Improve Health Care and Scale Up Quality Services. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC (URC).
[16] Manual de Estándares e Instrumentos para medir la calidad de la atención materno-neonatal. Ministerio de Salud Pública del Ecuador. CONASA. Quito, Agosto 2008.

Role of key partners:

CHS has a well- established working relationship with the provincial MOH Department of Norms. This Department is officially charged with improving quality of care in MOH facilities and CHS will work closely with this department in implementing all activities under this result. CHS will continue to work closely with established QI teams in each of the six MOH county hospitals in Cotopaxi province. CHS will actively reach out to User Committees where they exist to engage them in relevant quality improvement activities and strategies. CHS will collaborate with IESS authorities in Cotopaxi to coordinate quality improvement activities in IESS facilities.

Result/Outcome 4: Improved policy environment for coordination among community health workers, health care institutions, and community /social organizations

Current status:

The maternal/newborn health care system in Cotopaxi is currently fragmented among several provider institutions with very little or no coordination between institutions. Besides the MOH, which is the main provider, there also exist the Social Security Institute, the Seguro Campesino, NGOs and private for-profit providers. All of these formal providers account for around 2,000 deliveries a year. Traditional birth attendants also constitute an important provider of approximately 2,000 deliveries, mostly in rural settings. TBAs typically work in isolation from other provider institutions or facilities. The MOH has an official manual describing a mechanism to conduct maternal mortality surveillance, including analysis of maternal deaths, but these analysis sessions are not consistent and carried out only among few hospital staff. There is no mechanism established for surveillance and analysis of newborn deaths.

In spite of a favorable legal mandate, there exist few continuous legal enforcement mechanisms. Health committees that should represent the interests of local users and social organizations are frequently weak and ineffective. The participation of local governments in the strengthening of health care activities is weak and inconsistent.

Strategies and key activities:

4.1 Promote a favorable policy environment for provincial EONC network of community and facility-based services

Based on the existing legal framework (Constitution, General Health Law, Free Maternity Law, National Plan to Reduce Maternal and Newborn Mortality) the project will advocate for an strengthened coordination among institutions and between formal and traditional providers, starting at parish level but with an aim to build an integrated EONC network of community and facility-based services through the continuum of care. We will also promote the integration of local governments and community/local social organizations into this integrated network.

The project will promote a policy environment favorable to the development of a provincial EONC network along two dimensions: 1) inter-institutional, functionally linking service delivery at facilities belonging to different institutions, horizontally at each of the three levels of care, and 2) along the continuum of care, linking care through referral mechanisms from the parish and community-based health care delivery team through the county hospitals and provincial MOH and IESS hospitals.

4.2 Develop a provincial system for surveillance and analysis of maternal/newborn health indicators

Our project will support a review and strengthening of the existing system of surveillance of maternal mortality and will work with the MOH to develop a mechanism for surveillance and analysis of newborn mortality, at both community and facility levels. Voluntary community health workers trained by the project will track maternal and newborn deaths in every participating village, using a standard information gathering tool. Results will be reported to the Parish health Council (CONPAS). The parish health center doctor (or corresponding authority at hospital) will be responsible for organizing an audit of all identified maternal and newborn deaths and near-misses in the community and parish health center (or hospital). Providers and TBAs as relevant will discuss the specific circumstances of the death or near-miss and will explore key factors that may have contributed to the death or near miss. Community organization members and representatives of the parish health council will agree on specific actions to be taken at community, parish and health center levels in order to address and rectify probable contributing factors and deficits related to the death or near miss. A representative of the provincial MOH office –preferably its Director- will be expected to attend mortality and near-miss audits. .

If and when a maternal or newborn death occurs in a facility, a surveillance committee headed by the Provincial MOH director and integrated by the facility director and professionals will meet to discuss and identify flaws and treatment problems that could have been related to the death. A protocol for the discussion will follow, including a review of the clinical record in detail, as well as an audit of care related to compliance with official MOH norms and quality standards. Representatives of the communities of origin of the deceased will be invited to an open discussion on aspects that do not involve private personal information, as well as citizens' organizations including the County Health Council, the Free Maternity Law Users' Committee and the local press or media.

4.2 Strengthen county health committees and LMGAI users'groups

Through training activities and discussion meetings the Project will support the creation or strengthening of county health committees. These social participation structures are legally mandated by the Ecuador General Health Law, which describes in detail its composition and functions. The health committees are integrated by representatives of local social organizations, users' representatives and local governments. Their basic role

is to oversee and support the strengthening of health activities locally. The project will seek to strengthen the participation of users and social/community organizations in the improvement of health care delivery throughout the network. We will also support the activities of the Free Maternity Law Users' Committees, which by Law have a mandate to oversee and participate in the improvement of quality of maternal and newborn care.

PART 4: PLANS FOR ONGOING USAID MISSION INPUT

Since the start of preparatory activities in October 2009 the CHS team has met three times with the USAID Mission person in charge of coordination of the CSHGP project in Quito, Paulyna Martínez. These meetings have been very informative and mutually productive. During the life of the project we will continue meeting regularly every quarter, to present and discuss progress of project activities, to coordinate the participation of USAID Mission representatives in key activities, and to identify way in which this project work can be coordinated with other ongoing USAID activities in Ecuador.

PART 5: PROJECT WORK PLAN

See **Annex 1** for the complete project work plan.

Section B: Innovation

1. Summary of challenges:

Despite improving national averages of access and utilization of high-impact health care services in recent years, inequitable access to services persists between urban, educated, mestizo/white populations and rural, uneducated and Indian populations. The last maternal and child health national survey (ENDEMAIN 2004) showed the use of prenatal care at 86.8% for non-indian and at 61.5% for Indian rural pregnant women; skilled delivery at birth at 80.2% for non-indian and at 30.1% for Indian rural women; post-partum care at 37.7% for non-indian and at only 15.4% for Indian mothers. The results of our project KPC baseline survey likewise reinforce the findings of the 2004 ENDEMAIN national survey in the project Cotopaxi province: 49% of Indian mothers reported receiving 4 or more antenatal sessions as contrasted with 77% of Mestizo mothers; 36% of Indian mothers reported a facility birth while 89% of Mestizo women reported a facility birth.

In Cotopaxi and similar provinces in Ecuador, the public health care system, however, is primarily oriented towards offering care to the urban populations through a network of hospitals in provincial capital and county. At the parish level, the Ministry of Health and the Social Security Institute (IESS) offer ambulatory care through health centers that operate during day hours and are closed at nights and during weekends. The rural Indian population that lives in numerous communities around the urban centre of the parish receives maternal and newborn health care primarily from traditional birth attendants (TBAs), traditional healers and family members. There is very little or no coordination for the provision of high-impact services between public health care institutions, much less with the private providers. The four levels of care: community care by TBAs, parish-based ambulatory health centers, county hospitals and provincial hospital, are very much isolated from each other, far away from an ideal of a continuum of care within a network of services with functioning mechanisms of referral.

2. Description of the Innovation:

The central innovation of our project is the development of an integrated network of provincial Essential Obstetric Neonatal Care (EONC) services in the Cotopaxi province in coordination with TBAs, community organizations, MOH, IESS, and private organizations that integrates community, home, and facility-based services. The network of provincial EONC services will coordinate a continuum of maternal neonatal services from home to facility and will prioritize high-impact maternal newborn interventions proven to reduce leading causes of maternal and newborn mortality. Parish health teams (CONPAS) will be supported to meet on a regular basis (likely monthly) to problem solve and lead improved coordination of accessible, high quality community and facility maternal newborn services. Obstacles faced by TBAs in delivering MNH care will be reviewed regularly and the team will be taught to use QI methods to strengthen and measure results of improved home-based early post-partum care and referral processes at the parish level. Parish health teams will meet with clients to address key barriers to

adherence with referrals and prompt care seeking to support a strategy that is fully responsive to the real barriers clients face.

It is well established that the majority of childbirth-related deaths for mothers and newborns occur in the immediate post-partum period and during the first week after birth. The innovation proposed by this project will increase the use of high impact EONC through direct community-based care as well as referrals of mothers and newborns with signs of a complication. The project will promote coordination of provider institutions from the base of the care system, starting at the parish-level health centers of the MOH and the IESS that most of times operate in isolation. Coordination will be scaled up to the upper portions of the system and will include private providers at the county and provincial levels. We will bring in representatives of local parish and municipal governments to provide authority and support, based on several national laws that mandate the development of a coordinated public health care system.

The experience and knowledge obtained through this project will enrich and strengthen several policies currently under debate by the Ecuador MOH and other institutions, such as the policy on the role of TBAs and community agents in the public health system, the policy on how best to coordinate among health care institutions, the policy on the role of Essential Obstetric and Newborn Care towards reducing maternal and newborn mortality, the policy on how to institutionalize continuous quality improvement approaches.

3. Interest in the Innovation:
CHS and URC, through the USAID-funded QAP and HCI projects has provided technical assistance to the MOH for several years in the areas of improving maternal and newborn health care. The identification of the above described innovation has been an ongoing result of the continued joint work of the MOH and our projects. More specifically, early drafts of ideas for the work to be implemented in Cotopaxi were shared with the MOH both at central level in Quito and at the Cotopaxi provincial MOH office. Recent technical discussions with MOH teams of the MNH central program and of the Intercultural Health Office resulted in valuable insights to the proposed CSHG project. Our team has also met with representatives of TBAs in the Cotopaxi province, to present the basic ideas of the project and receive feedback.

Findings and results of this project will be shared and discussed on an ongoing basis with provincial and national MOH authorities. Because of the history of successful technical collaboration of the QAP and HCI projects with the MOH, we have direct communication with the office of the Director of the MNH programs, the MOH General Directorate and the Vice-minister for Health Care. We will promote public events to present results and discuss findings, especially oriented to decision makers who have an important influence in policy making in the areas of MNH and health care system reform. We will also disseminate findings through several mechanisms including conferences, presentations, trainings and the HCI webpages www.maternoninfantil.org (in Spanish) and www.hciproject.org

To inform uptake, replication and scale-up of the innovations, we will make use of our scale-up methods that have been used and proven in scaling up specific evidence-based EONC interventions in Ecuador and other LAC countries, such as AMTSL, the use of the partograph, screening for preeclampsia, and others.

4. Assessing Innovation:

We will assess our project innovation based on the following questions: a) To what extent has the proposed innovation (integrated network) been put in practice in the field and is operating as expected? b) To what extent the proposed innovation is producing expected results? c) To what extent the project and its proposed innovation are achieving expected impact?

Following we will list the main methods we intend to use for each of these categories of questions:

a) To what extent has the proposed innovation (integrated network) been put in practice in the field and is operating as expected?

We will identify and count, on a yearly basis, parishes where an integrated Parish-level Health Council (CONPAS) has been established and is meeting regularly to monitor implementation of their Parish-level maternal newborn health plan. Parish-level health plans and the monitoring of established maternal newborn plans will be assessed with regard to provision of high-impact services at community and facility levels and degree of communication and referral processes between different levels of health system as measured by project indicators for service provision, quality and referral at parish, county and province level.

b) *To what extent is the proposed innovation producing expected results (increase in delivery of high-impact MNH interventions at community and first-level of care; improved referral and communication processes)?*

Using an LQAS approach, we will establish quarterly for each parish if it reaches or not a given threshold for use of antenatal, skilled delivery and early post-partum services, as well as for levels of knowledge and household practices; we will quarterly assess the quality of these services being provide by TBAs, ambulatory health centers and hospitals using techniques such as simulation, case studies and clinical records' reviews. We will count the number and assess the quality of referrals by TBAs, health centers and county hospitals, along the continuum of the network.

d) To what extent are the project and proposed innovation achieving expected impact?

We will on an annual basis "met need" for maternal and newborn complications for each county, and measure yearly impact through maternal mortality, newborn and stillborn mortality, as well as hospital-based case-fatality rates for direct major obstetrical and newborn complications.

Section C: Monitoring and Evaluation

The project's monitoring and evaluation framework has been designed to support optimal project implementation design and ongoing process learning for continuous implementation improvement. The M&E framework is also designed to allow for evaluation of final project impact. The baseline and end line household KPC surveys will be the primary method of measuring impact on high-impact behaviors and care coverage at household level. Baseline and regularly collected process indicators at community, ambulatory, and hospital levels will track degree of performance for defined project indicators related to community and facility delivery and quality of antenatal, intra-partum and early post-partum services; referral/counter-referral processes and inter-institutional and provider linkages indicators. In preparing the DIP, the results of the baseline household KPC survey were shared with provincial MOH staff as a starting point for developing the project work plan and M&E strategy. Provincial MOH providers will participate actively in regular collection and analysis of project data. As can be seen in the M&E Table, indicators of program impact will be reviewed on an annual basis to analyze project weaknesses and strengths and to guide continuous performance improvement. Dissemination and interpretation of indicator results will be shared on an annual basis with key partners, including provincial MOH, community organizations and users committees, to ensure ongong alignment of project activities with partner and MOH priorities and strategies and to promote sustainability of project activities and results.

Project indicators (see M&E Table, annex 2), are organized under the project results categories (see results framework) and include coverage, process and outcome measures. For some types of indicators (e.g. quality of facility post-partum services), indicators will be measured using established MOH health information systems and records. However, for other categories of indicators, especially at community level, it is necessary to create simple, functional new information systems due to lack of established information systems. For example, there is no current TBA record system to capture interventions focused on TBA provision of early post-partum care, the topic of the project operations research. Likewise, there is no functioning information system to capture referrals and adherence with referrals across health system levels in the Cotopaxi province. While priority has been given to the reinforcement of existent information systems where possible to avoid duplication of parallel information systems, the project's strong focus on community-level maternal newborn services and linkages within an EONC provincial network has mandated the creation of simple new information systems. Qualitative and quantitative baseline assessments (as a follow on to household survey), currently under way at community at facility levels (see workplan), are helping to guide creation of simple data collection systems at community and systems level for essential project measures not currently captured in MOH HIS. Every effort is being made to ensure that new information systems are designed to be maximally simple, feasible, and responsive to MOH mid and long-term priorities for sustainability.

Two monitoring challenges for the project stemming from a lack of established data mechanisms include: 1) how best to measure project's central innovation of linkages between delivery sites within a provincial network of maternal newborn services, and 2) how best to evaluate and promote continuous quality improvement of TBA services in a sustainable way. Network linkages will be measured primarily through referral/counter referral data and provider-reported frequency of communications with other sites (e.g. TBA reports of communication with closest health center and county hospital staff within the past month). Quality of TBA services is measured on a quarterly basis through observation of simulated TBA antenatal and post-partum care (with occasional direct observation of real patient care when possible.)

One of the key strategies under project result # 4 is the creation of a provincial sub-system of surveillance and analysis of maternal and newborn deaths and near-misses as a central strategy for strengthening provincial-level health information systems that can in turn inform more effective implementation and management systems. At present, the lack of a parish, county or provincial information system for tracking maternal and newborn deaths represents a significant obstacle to designing and evaluating interventions (such as audit or verbal autopsy linked to action) for reducing maternal newborn mortality and morbidity. The M&E Table outlines simple indicators at facility and community levels for tracking deaths and near-misses, and tracking follow-on audits or verbal autopsy depending on level of health system. Project staff will work closely with provincial MOH, parish and county partners, partners and community organizations to support this central strategy of strengthening a coordinated provincial, county, and parish maternity newborn mortality surveillance system and sub-systems linked to local and provincial-level analysis for local action.

In Ecuador, official MOH policy mandates that MOH officials and providers must carry out audits on all maternal deaths in the facility or community. This process is regulated by law although implementation, as is to be expected, is often a challenge. The CSHGP project's primary role will be to support the MOH to effectively implement its established policy of requiring maternal death audits through two primary mechanisms:

1. Provincial level: In meetings with the Cotopaxi provincial MOH as part of ongoing close collaboration, project staff have proposed that the project work with the provincial MOH to strengthen implementation processes of mandated MOH-led maternal audits. To this end, project staff are working with provincial MOH staff to develop and test specific maternal death audit processes, particularly for home births that are generally not well monitored or audited by the MOH due to the significant challenges of monitoring and lack of audit implementation mechanism. The project is optimistic that its strong focus on home-based maternal newborn services and work with TBAs via parish health

councils will help to facilitate improved monitoring and audits of home maternal and newborn deaths.

2. Parish level: as part of routine project monitoring at parish level, the project will help the MOH to identify where and when deaths are occurring and will incorporate results of MOH-led audits into ongoing QI activities by Parish health councils (CONPAS) to learn from and correct lessons learned. It is likely that the CONPAS teams will have a sub-working group that focuses specifically on monitoring of mortality and near-misses and coordination with MOH-led audits.

Of note is that current MOH policy in Ecuador does not mandate audits of newborn deaths. Project staff are advocating for the MOH to adopt legislation mandating audit of newborn deaths as for maternal deaths. In the meantime, the project intends to support audits to the extent possible of newborn deaths at parish level under the leadership of a CONPAS sub-committee.

See **Annex 2** for the complete Monitoring and Evaluation Table.

Section D: Revisions

Technical Revisions

- Addition of Family Planning (FP) intervention as part of antenatal and post-partum counseling and post-partum service package at home and facility level.

- OR topic has been narrowed since original proposal from an assessment of entire project innovation to an assessment of one of the key project interventions: home-based early post-partum care.

- Narrowing of the Intervention area to target 24 out of 40 parishes in the Cotopaxi province that focus on move impoverished & indigenous subpopulations. (Target Population Data found in **Annex 14**)

- Given the recent discovery of the very weak functionality of the MOH EBAS community extension program in actual practice on the ground, the revised DIP strategy places relatively less emphasis on EBAS teams as a primary venue of implementation and instead proposes a Parish Health Team (CONPAS) as the primary venue of implementing and linking high-impact maternal newborn services at community and facility levels.

Budget Revisions

See **Annex 3** for the complete revised budget, supporting narrative explaining costs in each category, and justification for revisions.

Section E: Project Management

A full human resources table describing the roles and responsibilities of project staff members in Ecuador and at CHS Headquarters, levels of effort, organizational affiliations, and additional information is included in **Annex 4.**

CHS has established partnerships with local stakeholders and already has a team of highly qualified professionals with strong technical and management skills in place to implement the Ecuador CSHGP program. CHS has a long-standing relationship with key stakeholders in Ecuador as well as an in-depth understanding of the local context which will ensure rapid start-up of the project. CHS will provide overall technical direction and management of the project and work closely with key local stakeholders, including the National MOH, CONASA, Seguro Social Campesino, and the Provincial MOH in Cotopaxi, to build local capacity and ensure sustainability of project results. The working relationship between partners for project implementation is depicted in the Project Organigram included in **Annex 5a.**

The CHS Team provides experienced headquarters technical support of field activities through various methods, including (1) review of technical strategies before implementation; (2) formal review of overall technical activities after six months, including reporting of results to date; and (3) annual technical reports emphasizing outcome data. An Organizational Chart delineating the project staff and linkages between headquarters and the in-country office is included in **Annex 5b**.

Letters of Agreement between CHS and the Government of Ecuador and other key stakeholders are found in **Annex 6.**

The project has three Key Personnel positions, which are currently filled and approved by USAID/Washington: **(1)** Latin America Regional Director for CHS and URC, Dr. Jorge Hermida; **(2)** CHS HQ Technical Backstop, Dr. Kathleen Hill; (**3)** Field Program Manager, Dr. Mario Chavez. Drs. Hermida and Hill share joint responsibility for ensuring the successful implementation of the program; Dr. Chavez is responsible for day-to-day project management and technical oversight. Full Job descriptions for these three key personnel positions and biographies of key personnel are included in **Annex 7.**

Drs. Hermida and Hill are responsible for coordinating all communication with CSHGP officials and ensuring effective communication and collaboration between project and headquarters staff. They are responsible for mobilizing technical and administrative support needed for effective and efficient project implementation. As the Latin America Regional Director, Dr. Hermida provides direct oversight to the project team and

communicates regularly with the headquarters team. In addition to the project oversight, Dr. Hermida also provides technical expertise in child survival and Quality Improvement.

In addition to support from Dr. Hill as the technical backstop at corporate headquarters, the project staff is also supported by a Project Coordinator, QI Advisors/Technical Specialists, and the Associate Director for Administration, a Corporate Monitor, a CHS Contracts Official, and staff accountants from CHS's finance department. The Project Coordinator provides administrative backstopping to the project staff, ensuring that all project reporting deadlines are met and that financial records are kept up to date. The Project Coordinator reports to Dr. Hermida and Dr. Hill and works in close coordination with headquarters contracts staff as well as project staff to ensure accountability of project finances. In country, the Administrative Finance Officer is responsible for day to day management of funds, under supervision of the Field Program Manager and Latin America Regional Director; she also works in close coordination with the project coordinator.

Dr. Chavez is responsible for the day-to-day technical and administrative oversight of the project. He reports to the Latin America Regional Director for CHS/URC, and oversees the work of the other technical staff, and liaises with key project stakeholders and local partners. He will arrange for the external mid-term and final evaluation for the project through identification of consultants, mobilization of resources, and coordination of evaluation efforts with project plans and implementation.

The additional local staff includes the Community Level Activities Coordinator, Facility Level Activities Coordinator, the Community Mobilization Expert, as well as an Administrative Finance Officer and Administrative Assistant. These staff members are supervised by the Field Project Manager.

Section F: Training Plan

See **Annex 8** for the complete project training plan.

Section G: Operations Research Concept Paper

See **Annex 9** for the complete Operations Research Concept Paper. See **Annex 13** for Institutional Review Board Approval.

Section H: CSHGP Data Form

See **Annex 11** for the complete CSHGP Data Form.

List of Annexes

Required Annexes

1. Project Work Plan
2. M&E Table
3a. Revised Budget
3b. Budget Narrative & Budget Revisions
4. Management/Human Resources Table
5a. Organizational Chart – CHS Ecuador CSHGP Team
5b. Ecuador CSHGP Organigram
6a. Memorandum of Understanding: USAID – Ecuador Ministry of Foreign Relations
6b. Letter of Agreement: CHS – Ministry of Public Health (English)
6c. Letter of Agreement: CHS – Ministry of Public Health (Spanish)
6d. NGO & PVO Letters of Support
7a. Key Personnel Job Descriptions
7b. Key Personnel Biographies
8. Training Plan
9. Operations Research/Evaluative Plan
10. KPC Report
11. CSHGP Data Form

Optional Annexes

12. Map of Project Area
13. Institutional Revew Board Approval – Operations Research
14a. Poverty & Extreme Poverty (Cotopaxi Province)
14b. Poverty & Extreme Poverty (CSHGP Targeted Parishes)

Annex 1 – Project Work Plan
DIP Section A, Technical Approach

PROVINCIAL MOH OFFICE - COTOPAXI
Cotopaxi, Ecuador Essential Obstetric and Neonatal Care Project- 2010 AOP

PURPOSE: Reduce maternal and neonatal morbidity and mortality in Cotopaxi province.

GENERAL OBJECTIVE: Improved household health promotion practices and utilization of a continuum of high-impact community and facility maternal newborn services provided as part of a coordinated network of CHWs, health facilities and social organizations.

EXPECTED OUTCOME #1: Increased availability / access to and utilization of a coordinated continuum of high-impact maternal newborn care provided as part of a network of community and facility services.

STRATEGIES	GOALS %	ACTIVITIES **denotes project-wide activity	2010 (1st County--Pujili Canton)				2011 (Counties 2 and 3)				2012 (Counties 4 and 5)				2013 (County 6)			
			Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
Project-wide Cross-cutting Activities relevant to all results		0.1. Coordination meetings with Cotopaxi MOH **																
		0.2 Coordination meetings with national MOH **																
		0.3. Plan and implement KPC household survey (baseline and end line) **																
		0.4. Prepare & submit DIP **																
		0.5. Initial focus group with TBAs **																
		0.6. Workshop to develop detailed operational project work plan with MOH Cotopaxi **																
		0.7 Mid-term evaluation by external consultant **																
		0.8 Final Evaluation by external consultant **																
		0.9 OR (concept paper ; ongoing data collection/analysis; final report) **																
1. Coordinate TBAs, health centers, and EBAS, for high-impact maternal and neonatal care.	**1.1** 100% of targeted project parishes have created a parish inter-institutional health care micro-network by end of project, led by parish health council.	**1.1.1** Develop technical proposal for creation of Parish-level Micro-Networks **																
		1.1.3 Develop technical proposal for creation of Parish-level Health Plans **																
		1.1.4 Visit to Cusubamba to learn about the Parish Council experience **																

EXPECTED OUTCOME #1: Increased availability / access to and utilization of a coordinated continuum of high-impact maternal newborn care provided as part of a network of community and facility services.

STRATEGIES	GOALS %	ACTIVITIES **denotes project-wide activity	2010 (1st County--Pujili Canton)				2011 (Counties 2 and 3)				2012 (Counties 4 and 5)				2013 (County 6)			
			Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
		1.1.5 Meeting with NGOs from targeted county by year (FEPP, Plan Internacional) **																
		1.1.6 Meetings with Cotopaxi MOH office and technical team from targeted county Health Area (by year) to introduce & review plan for parish Micro-Networks **																
		1.1.7 Meetings in targeted parishes (by year) to begin creation of micro-networks among parish health providers (TBAs, MOH-SSC, among others)																
	1.2 100% health micro-networks have a maternal and neonatal health plan	**1.2.1** Meetings with activated parish health councils (CONPAS) to create Parish maternal newborn health plans																
	1.3 100% health micro-networks monitor health plan through monthly meetings	**1.3.1** Quarterly meetings to monitor implementation of parish health plan with CONPAS from each parish																
2. Develop /strengthen communication and referral mechanisms among healthcare levels (community-level, 1st. and 2nd. level)	**2.1** Updated Provincial referral/counter-referral guidelines	**2.1.1** Provincial meeting with technical staff from health areas, Cotopaxi MOH Office, Provincial Hospital, and TBAs, to review and update the current Cotopaxi referral guide. (1 day) **																
		2.1.2 Revise Provincial Referral and Counter- referral Guidelines in collaboration with Cotopaxi MOH **																
	2.2 100% of county hospitals and parish micro-networks (targeted by year) use a common set of referral and counter-referral set of guidelines	**2.2.1** Meeting with county technical team (targeted by year) and County Hospital to train staff on revised referral guidelines. **																
		2.2.2 Meetings with parish micro-networks (targeted by year) to train members on revised referral guidelines and processes.																

EXPECTED OUTCOME #1: Increased availability / access to and utilization of a coordinated continuum of high-impact maternal newborn care provided as part of a network of community and facility services.

STRATEGIES	GOALS %	ACTIVITIES **denotes project-wide activity	2010 (1st County--Pujili Canton)				2011 (Counties 2 and 3)				2012 (Counties 4 and 5)				2013 (County 6)			
			Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
	2.3 100% targeted parish micro-networks have an established Obstetric and Neonatal Emergency Committee and Transportation Plan.	**2.3.1** Develop Guide aimed at parish micro-networks to implement obstetric and neonatal emergency plans and committees in selected communities. **																
		2.3.2 Support Parish health council (CONPAS) emergency sub-committee to develop, implement and monitor maternal newborn emergency and transportation plans.																
3. Improve interpersonal relations between health personnel and community health workers/TBAs	**3.1** 70% of TBAs (and Community Health Workers) interviewed rate interpersonal relations with health staff as "Good" or "Very Good"	**3.3.1** Sensitize parish providers (skilled & TBAs) on cross-cultural perspectives and improved interpersonal relations between facility and community providers during quarterly parish health council meetings and supervision visits (buen trato)																
		3.3.2 Meetings to promote cultural exchange among TBAs, community health workers and health personnel within each parish Micro-Network (by year)																
	3.2 70% of health personnel interviewed rate interpersonal relations with TBAs (and community health workers) as "Good" or "Very Good"	**3.2.1** Interviews to measure perceived quality and frequency of interpersonal communications between providers, TBAs and community health workers																
		3.2.2 Disseminate interview results at quarterly Parish Health Council meetings																

EXPECTED OUTCOME #1: Increased availability / access to and utilization of a coordinated continuum of high-impact maternal newborn care provided as part of a network of community and facility services.																		
STRATEGIES	**GOALS %**	**ACTIVITIES** **denotes project-wide activity	**2010 (1st County--Pujili Canton)**				**2011 (Counties 2 and 3)**				**2012 (Counties 4 and 5)**				**2013 (County 6)**			
			Oct-Dec	**Jan-Mar**	**Apr-Jun**	**Jul-Sep**	**Oct-Dec**	**Jan-Mar**	**Apr-Jun**	**Jul-Sep**	**Oct-Dec**	**Jan-Mar**	**Apr-Jun**	**Jul-Sep**	**Oct-Dec**	**Jan-Mar**	**Apr-Jun**	**Jul-Sep**
4. Actively involve community organizations and local governments	**4.1** 100% of project parishes from targeted counties (by year) have formed a Parish Health Council (CONPAS), incorporating the Micro-Network, the Parish Board and Social Organizations.	**1.1.2** Develop technical proposal for creation of Parish Health Councils (CONPAS)																
		4.1.1 Meeting with the provincial indigenous organization (MICC) to introduce the Project and reach agreement on methods and collaboration. **																
		4.1.2 Meeting with targeted county leadership (by year) of indigenous grassroots organizations to introduce project and establish agreements for collaboration and project strategy. **																
		4.1.3 Parish-level meetings with community leaders, parish boards, representatives of TBAs, community health workers and women's groups to create/strengthen the Parish Health Council.																

EXPECTED OUTCOME # 2: Improved knowledge / demand for evidence-based community and facility-level maternal newborn services, including improved household health promotion practices.																			
STRATEGIES	GOALS %	ACTIVITIES	2010				2011				2012				2013				
			Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr - Jun	Jul - Sep	Oct - Dic	Ene - Mar	Abr - Jun	Jul - Sep	
1. Behavior Change Communication Activities	**1.1** A top-ranked radio station transmits radio spots regularly	**1.1.1** Develop and produce Spanish and Kichwa radio spots for priority maternal newborn messages (birth preparedness/ emergency readiness; importance of pregnancy, birth and *early post-partum* checkups by trained TBA or skilled provider; danger signs for mother and newborn; family planning; breastfeeding and nutrition; rights-based intercultural care. **																	
		1.1.2 Identify top-ranked radio stations in the province **																	
		1.1.3 Contract services and sign agreements with selected radio stations **																	
		1.1.4 Dissemination of radio spots **																	
		1.1.5 Monitoring dissemination of radio spots **																	
	2.1 TV COLOR transmits television spots regularly; TV MIC [indigenous network] (depending on coverage)	**2.1.1** Develop and produce Spanish and Kichwa television spots on neonatal danger signs **																	
		2.1.2 Contract services and sign agreements with selected television stations.**																	
		2.1.3 Dissemination of television spots **																	
		2.1.4 Monitoring the dissemination of television spots **																	
		2.1.5 Distribution of DVDs with educational messages in target parishes,																	
	3.1 Two parishes from each targeted county (by year) hold a "maternal newborn	**3.1.1** Select Maternal – Neonatal Health topics and people responsible for different stands																	
		3.1.2 Design promotional material (posters,																	

EXPECTED OUTCOME # 2: Improved knowledge / demand for evidence-based community and facility-level maternal newborn services, including improved household health promotion practices.																			
STRATEGIES	GOALS %	ACTIVITIES	2010				2011				2012				2013			
			Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr - Jun	Jul - Sep	Oct - Dic	Ene - Mar	Abr - Jun	Jul - Sep
	community fair" each year. (possibility of including this goal in every Parish Health Plan)	large-scale ads, for each area using a rights-based and intercultural approach, exhibition tents, 4 chairs for each tent) and preparation of satisfaction surveys **																
		3.1.3 Coordination with other health care institutions.**																
		3.1.4 Invite citizens to participate in the open-house fair using loudspeakers, fliers, letters, etc.																
		3.1.5 Hold open-house/community fair																
		3.1.6 Asses community perception via a participant satisfaction survey																
2. Strengthen counseling activities carried out by health personnel, TBAs and community health workers, at facilities as well as in homes.	**2.1** Set of pictorial counseling materials produced for key counseling themes	**2.1.1** Design, validate and print pictorial counseling job aids for use by TBAs and community health workers. **																
		2.1.2 Create TBA kit (backpack, rain coat, counseling & other tools) to incentive TBAs **																
		2.1.4 Distribute kits to TBAs/CHWs through parish health councils in targeted counties (by year).																
	2.2 Counseling training workshop for skilled providers in targeted counties conducted each year	**2.2.** Training on counseling for skilled providers. **																
	2.3 Counseling training workshop for TBAs and CHWs in targeted counties conducted each year.	**2.3** Training on counseling skills and use of job aid with TBAs. **																
3. Improve cultural competence of institutional	**3.1** Three parish health councils from each county targeted by year implement Cultural Adaptation of Care activities	**3.1.1** Initial introductory HACAP workshops in targeted county parishes.																

EXPECTED OUTCOME # 2: Improved knowledge / demand for evidence-based community and facility-level maternal newborn services, including improved household health promotion practices.																			
STRATEGIES	GOALS %	ACTIVITIES	2010				2011				2012				2013			
			Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr - Jun	Jul - Sep	Oct - Dic	Ene - Mar	Abr - Jun	Jul - Sep
health care services	**3.2** 25% improvement in user satisfaction regarding cultural aspects of care	**3.2.1** Base line measurement through user satisfaction surveys in targeted county hospital and parish ambulatory health centers implementing cultural adaptation of care activities.																
		3.2.2 User satisfaction measurements every six months, with students conducting exit interviews at hospitals **																
		3.2.3 Data processing by the CQI team of the Canton Hospital, and the Intercultural Office staff at other units, 1 day every 6 months.**																
4. **Disseminate citizens right to quality health care**	**4.1** Radio spots on citizens right to quality health care regularly disseminated	**4.1.1** Production, validation and dissemination of radio spots on citizens rights to quality health care **																
	4.2 90% of parish health councils implement information dissemination activities on citizen rights to quality health care	**4.2.1** Creation of bulletin boards about citizens rights **																
		4.2.2 Talks on citizen rights aimed at users in health units **																
		4.2.3 Socialization of citizen rights amid grassroots and community organizations **																
	4.3 Targeted County councils (by year) conduct 1 round table with authorities and social organizations to publicly disseminate citizens rights to quality health care	**4.3.1** Coordinate with the Canton Council round table planning.**																
		4.3.2 Prepare invitations for participating social actors (mayor, health area director, representative of children and adolescents)**																
		4.3.3 Conduct round table with 60 members of the Canton Council.																
		4.3.4 Support remaining cantons for reactivation of Canton Councils																

EXPECTED OUTCOME # 3: Improved quality of maternal-neonatal services provided as part of a coordinated network of facilities and community agents																		
STRATEGIES	GOALS %	ACTIVITIES	2010				2011				2012				2013			
			Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct - Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep
1. Train TBAs for Basic EONC skills	**1.1** 100% of TBAs participating in project accredited by the MOH on community EONC skills and competences	**1.1.1** Baseline assessment of TBA knowledge, attitudes and practices **																
		1.1.2 TBA training manual updated, using a rights-based and intercultural approach **																
		1.1.3 Technical meeting to validate updated training manual **																
		1.1.4 Community EONC training workshop (2 days) in targeted parishes (by year)**																
		1.1.5 Follow-up and evaluation of Community EONC in every Micro-Network																
2. Design/implement mechanisms for TBA supervision and CQI	**2.1** TBA Supervision and CQI system designed and implemented in all parishes	**2.1.1** Design supervision methodologies and tools **																
		2.1.2 2 Introductory workshop to train supervisors/providers and validate the TBA supervision system with staff from Micro-Networks **																
		2.1.4 Assessment of Supervision System at each Micro-Network																
3. Strengthen EONC knowledge / skills of health care workers	**3.1** 100% of EONC providers from targeted counties (by year) trained on core EONC skills and competences	**3.1.1** Identification of county health care providers to be trained (annual exercise in each new county)																
		3.1.3 EONC training workshops for targeted county providers: MOH, IESS, SSC, private provider TBA's): topics to be covered include: Preeclampsia / Eclampsia management, Hemorrhage, Red Code, Neonatal Sepsis, Premature Birth, Neonatal CPR **																
	3.2 100% of EONC providers from the Provincial Hospital possess EONC skills and competences	**3.2.1** Consultancy to develop proposal for creation of Intensive Neonatal Care Unit **																
		3.2.2 Request presented by the Cotopaxi MOH Office before the MOH central level soliciting Human Resources for the provincial hospital ICU																
		3.2.3 Training on EONC skills and competences for health professionals from the Provincial Hospital. **																

EXPECTED OUTCOME # 3: Improved quality of maternal-neonatal services provided as part of a coordinated network of facilities and community agents																		
STRATEGIES	GOALS %	ACTIVITIES	2010				2011				2012				2013			
			Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct - Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep
		3.2.4 Technical meetings to design graphic material with maternal neonatal technical content aimed at units that attend deliveries **																
		3.2.5 Production and distribution of graphic material																
4. Strengthen supervision and QI mechanisms for health facilities	**4.1** 100% of operative units report rapid improvement cycles **4.2** > 70% Average Compliance with Standards for management of Maternal and Neonatal Complications	**4.1.1** Facility-based assessment **																
		4.1.2 QI training (inc. formation of facility CQI teams) integrated into clinical technical training **																
		4.1.3 Provide support to the Cotopaxi MOH Office on Quality Management **																
		4.2.1 Technical support visits for CQI teams that require them **																
5. Design / implement community/users participation in CQI control	**5.1** Established role of users/community representatives regarding quality improvement inside the CONPAS and Canton Health Council **5.2** 75% of users/community representatives inside CONPAS and Canton Health Council trained to perform their role **5.3** Users/community representatives participate in 75% of CONPAS meetings	**5.1.1** Develop proposal for the role of users/community representatives inside CONPAS, Canton Health Council and Free Maternity Law User Committees**																
		5.1.2 Meeting to socialize and validate the proposal **																
		5.2.1 Workshop to train user representatives on Quality Improvement oversight role **																
		5.3.1 Follow-up and support meetings																

EXPECTED OUTCOME # 4: Improved policy environment for coordination among community agents (TBAs), health care institutions and community/social organizations.																			
STRATEGIES	GOALS %	ACTIVITIES	2010				2011				2012				2013			
			Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep
1. Promote a County-level EONC network that includes community and institutional services	**1.1** Functional County EONC Network consisting of three levels: community, institutional and inter-institutional. **1.2** Network Monitoring System designed and functioning	**1.1.1** Develop technical proposal for creation of a Canton-level EONC Network (including list of actors and monitoring system design) **																
		1.1.2 Workshop with county maternal newborn providers to validate the proposal and create the Canton EONC Network **																
		1.1.3 Quarterly coordination and monitoring meetings of County Network and parish health councils. **																
2. Develop a subsystem for oversight and analysis of maternal and neonatal deaths	**2.1** Subsystem for Epidemiological Oversight of Maternal and Neonatal Health (VESMNN) and analysis of MM and NM, created and functioning in targeted counties by year and aligned with provincial monitoring.	**2.1.1** Expert meeting to design subsystem for epidemiological oversight of maternal and neonatal health **																
		2.1.2 Subsystem for Epidemiological Oversight of Maternal and Neonatal Health backed by the Ministry of Public Health **																
		2.1.3 Meeting to socialize the VESMNN subsystem with representatives from the Micro-Networks and actors from the Canton Network; creation of the Canton VESMNN Committee. **																
	2.2 80% of MD and ND analyzed by the oversight subsystem, with corresponding technical-legal resolutions	**2.1.4** Monthly meetings of the Canton VESMN Committee to evaluate and monitor the subsystem and analyze MD and ND. **																
3. Strengthen County and Parish-level Health Councils and Free Maternity User Committees	**3.1** Strengthened County Health Council (by targeted county each year)	**3.1.1** Participation in County Health Council meetings **																
	3.2 Parish Health Councils (CONPAS) from 100% of project parishes in targeted counties reinforce Quality Management	**3.2.1** Meetings to strengthen CONPAS Quality Management of Maternal and Neonatal Health **																
		3.2.2 Creation of Parish Annual Operation Plan in 7 parishes from the canton																

EXPECTED OUTCOME # 4: Improved policy environment for coordination among community agents (TBAs), health care institutions and community/social organizations.																			
STRATEGIES	GOALS %	ACTIVITIES	2010				2011				2012				2013				
			Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	Oct-Dic	Ene-Mar	Abr-Jun	Jul-Sep	
	of Maternal and Neonatal Health	**3.2.3** Quarterly Parish Health council meetings will include review of parish health council support for CQI of parish maternal newborn services (TBA and facility) **																	
	3.4 Organizational strengthening and training of County and parish User Committees	**3.4.2** Creation of Parish User Committees in targeted counties by year.																	
		3.4.1 Training workshop for canton and parish CUS on citizen oversight; dissemination of legal framework for EONC network; and Free Maternity Law (participation of Provincial CUS) **																	
4. Disseminate legal framework supportive of EONC Network	**4.1** Communication proposal to disseminate Legal Framework supportive of EONC Network	**4.1.1** 2 Meetings with County Health Council to develop communication strategy for dissemination of legal framework for universal access to quality maternal newborn care. **																	
	4.2 Regular dissemination of graphic and printed material about the Legal Framework for EONC Network in line with defined strategy (including media dissemination)	**4.2.1** Implementation of defined strategy including printing and /or reproduction of legal framework materials aimed at different audiences within EONC network at provincial, county and parish levels. **																	

Annex 2 – M&E Table
DIP Section C: Monitoring & Evaluation

Objective / Result	Indicators	Rapid Catch Indicator	Source / Measurement Method	Frequency	Baseline Value	EOP Target
1. Increased availability/ access to a coordinated continuum of high-impact maternal newborn care provided as part of a network of community and facility services.	**Coverage & Utilization of maternal newborn care services**					
	% of mothers with children ages 0-23 mos. who report 4 or more ANC visits when they were pregnant with their youngest child	YES	HH Survey	Baseline/Endline	69%	75%
	% of mothers with children ages 0-23 mos. who received at least two tetanus toxoid vaccinations before the birth of their youngest child	YES	HH Survey	Baseline/Endline	42%	50%
	% of mothers with children aged 0-23 mos who report a delivery with an SBA at a health center (midwife, doctor, or nurse)	YES	HH Survey	Baseline/Endline	74%	80%
	% of mothers with children ages 0-23 mos. who report post-partum visit in health center within first 2 days of life after a home delivery	NO	HH Survey	Baseline/Endline	Pending	TBD
	% of mothers with children ages 0-23 mos. who report home post-partum visit within first 2 days of birth after a home or facility delivery.	NO	HH Survey	Baseline/Endline	7%	25%
	Referral process and outcome Indicators					
	Revised referral guidelines/protocol for maternal newborn services at community, ambulatory and hospital level	NO	Ecuador MOH & Project Documents	Annual	NA	Yes
	% of participating parishes that have held a "referral workshop" with TBAs and parish health center representatives in last year	NO	Project Documents	Annual	NA	85%
	% of counties in Cotopaxi province that have held a "referral workshop" with hospital and parish health center staff in last year.	NO	Project Documents	Annual	NA	85%
	Number of patients treated for a maternal complication in parish health center or county hospital referred by TBA	NO	Parish Health Center or County Hospital Record	Quarterly	Pending	TBD
	Number of newborns treated for a newborn complication in parish health center or county hospital referred by TBA	NO	Parish Health Center or County Hospital Record	Quarterly	Pending	TBD
	% of women treated for a maternal complication in hospital referred from a lower level center	NO	County & Provincial Hospital and Parish Records	Quarterly	Pending	TBD
	% of newborns treated for a newborn complication in hospital referred from a lower level center	NO	County & Provincial Hospital and Parish Records	Quarterly	Pending	TBD
	% of hospitals that have established maternal newborn referral guidelines	NO	Hospital Survey	Annual	Pending	90%
	% of TBAs who report to know how to contact a skilled provider at nearest health center	NO	TBA Survey	Annual	Pending	TBD
	% of TBAs who report to have visited nearest health center in last 3 months	NO	TBA Survey	Annual	Pending	TBD
	% of TBAs who report a supervision visit by a skilled health provider within past 3 months	NO	TBA Survey	Annual	Pending	TBD
	Access to emergency care: transport availability:					
	% of CONPAS (Parish Health) Teams that have an established Obstetric and Neonatal Emergency Committee and emergency transportation Plan	NO	Parish Health Team Emergency preparedness committee	Annual	Pending	90%
	TBA Service Coverage and referral patterns					
	% of TBA's active in project who report providing Post-partum home visits within first two days of birth (for home and facility births)	NO	TBA Survey	Bi-Annual	NA	90%
	# of early post-partum visits (1st 2 days) made by project parish TBA's in last quarter	NO	TBA Record	Quarterly	NA	TBD
	# of newborns referred to health center or county hospital by TBA within past 3 months	NO	TBA Record	Quarterly	NA	TBD
	# of pregnant women referred to health center or county hospital by TBA within past 3 months	NO	TBA Record or Recall	Quarterly	NA	TBD
	# of women in labor referred to health center or county hospital by TBA within past 3 months	NO	TBA Record or Recall	Quarterly	NA	TBD
	# of women post-partum referred to health center or county hospital by TBA within past 3 months	NO	TBA Record or Recall	Quarterly	NA	TBD
	Coordination of community and facility services					
	% of parishes that have an operating Parish Health Team (CONPAS) that met at least once in last quarter	NO	Project CONPAS team records	Quarterly	NA	90%
	% of parish CONPAS teams that have a parish maternal newborn health plan	NO	Project CONPAS team records	annual	NA	90%
2. Improved knowledge of/ demand for evidence-based community and facility MNC services, including improved household health promotion practices	**Household knowledge and practice**					
	% of mothers children 0-23 mos. who report BF within first hour after birth	YES	HH Survey	Baseline/Endline	56%	65%
	% of mothers of children 0-23 mos. who did not give anything other than breast milk until age 6 months	NO	HH Survey	Baseline/Endline	55%	65%
	% of mothers ages 0-23 months who can name two pregnancy danger signs	NO	HH Survey	Baseline/Endline	63%	75%
	% of mothers of children 0-23 mos. who can name two newborn danger signs.	NO	HH Survey	Baseline/Endline	60%	70%
	% of mothers of children 0-23 mos. who can name two post-partum maternal danger signs.	NO			60%	70%
	% of mothers of children 0-23 mos. who made at least 2 birth preparations before birth of their youngest child	NO	HH Survey	Baseline/Endline	56%	65%
	% of mothers of children 0-23 mos. who followed through on referral by TBA for post-partum complication for newborn	NO	TBA records	Quarterly	NA	TBD
	BCC and Counseling					
	% of parish-based CONPAS implementing BCC activities in last quarter, in accordance to their BCC plan.	NO	CONPAS and project records	Quarterly	NA	90%
	% of TBAs in each parish with more than 75% score of adherence with a set of evidence-based standards for post-partum counseling for mothers and newborns	NO	Observation of TBA Simulated Counseling Sessions by Project staff or MOH staff	Bi-Annual	Pending	TBD
	% of antenatal / antepartum care sessions in parish health center with at least 75% score of adherence with a set of evidence-based standards including counseling	NO	Compound Indicator - Review of Sample Parish Health Center Records	Monthly	Pending	TBD
	% of post-partum care sessions at health center with at least 75% score of adherence with a set of evidence-based standards including counseling standards.	NO	Compound Indicator - Review of Sample Parish Health Center Post Partum Records	Monthly	Pending	TBD
	Improved cultural responsiveness of institutional health services:					
	% of parish health centers and county hospitals who have implemented at least one new intervention for increasing cultural responsiveness of delivery and post-partum care within past 3 months, in accordance to Humanization and Cultural Adaptation (HACAP) plan	NO	Facility Survey	Annual	NA	90%
	Promote Awareness of Citizens' rights to quality health care & support legal enforcement mechanisms					
	% of counties in which radio messages have been broadcast on citizen health care rights including Free Maternity Law in past 6 months	NO	Project Records	Bi-Annual	NA	100%
	% of parishes / counties in which social organizations or Free Maternity Law User Committee members have participated in at least one COMPAS or County Health Committee meeting in 6 months, advocating for quality of care in accordance to a predefined role.	NO	Project and CONPAS records	Annual	NA	90%

3. Improved quality of MNC services provided as part of a coordinated network of CHWs and facilities	**Quality of Facility Services**					
	% of deliveries benefitting from AMTSL in participating facilities	NO	Facility Records	Quarterly	pending	TBD
	% of births demonstrating compliance with partograph use in participating facilities	NO	Facility Records	Quarterly	pending	TBD
	% of births demonstrating compliance with use of corticoids for fetal lung maturity in preterm birth in participating facilities	NO	Facility Records	Quarterly	pending	TBD
	Compliance with evidence-based case-management standards for premature rupture of membranes	NO	Facility Records	Quarterly	pending	TBD
	% of births demonstrating compliance with Essential Newborn Care Standards in participating facilities	NO	Facility Records	Quarterly	pending	TBD
	Compliance with evidence-based PPH management standards in participating facilities	NO	Facility Records	Quarterly	pending	TBD
	Compliance with evidence-based newborn sepsis case-management standards in participating facilities	NO	Facility Records	Quarterly	pending	TBD
	Compliance with evidence-based neonatal resuscitation standards in participating facilities	NO	Facility Records	Quarterly	pending	TBD
	TBA knowledge & competence					
	% TBAs able to cite at least 2 antenatal danger signs	NO	TBA Survey	Annual	pending	TBD
	% TBAs able to cite at least 2 birth preparedness actions	NO	TBA Survey	Annual	pending	TBD
	% TBAs able to cite at least 2 post-partum danger signs for mother	NO	TBA Survey	Annual	pending	TBD
	% TBAs able to cite at least 2 post-partum danger signs for newborn	NO	TBA Survey	Annual	pending	TBD
	% TBAs able to cite at least 2 newborn best practices	NO	TBA Survey	Annual	pending	TBD
	#/% TBAs in active project parishes trained in community/home-based high-impact maternal newborn services	NO	Project Records	Annual	NA	100%
	% average TBA compliance with post-partum counseling standards by observation of simulated or real client counseling session	NO	Direct Observation of sample of TBAs	Quarterly	pending	85%
	% average TBA compliance with post-partum newborn examination standards for identification of danger signs by observation of simulated or real-newborn physical examination	NO	Direct Observation of sample of TBAs	Quarterly	pending	85%
	QI processes					
	% of parish health centers in which QI team completed at least one Rapid Improvement Cycle in last quarter	NO	Facility Survey, Project & MOH Records	Quarterly	NA	85%
	% of county hospitals in which QI team completed at least one Rapid Improvement Cycle in last quarter	NO	Facility Survey, Project & MOH Records	Quarterly	NA	85%
4. Improved policy environment for coordination among community health workers, health care institutions, and community /social organizations	% of parishes that have an operating Parish Health Council (CONPAS) with representation of MOPH health center, local Seguro Campesino facility, TBAs, social organizations and local Government (Junta Parroquial)	NO	Project Records	Annual	NA	95%
	% of counties that have an operating County Health Council in accordance to official Government guidelines	NO	Project Records	Annual	Pending	TBD
	% of counties that have an established Free Maternity Law Users' Committee	NO	Project Records	Annual	Pending	TBD
	% of municipal governments that have operating mechanism to pay for transportation of obstetric emergencies	NO	Interview Municipal govt rep	Annual	Pending	TBD
	Develop a provincial maternal and newborn surveillance and audit system					
	% of facility maternal deaths in last 6 months that have been investigated with maternal audit	NO	MOH & CONPAS Records	Bi-Annual	Pending	TBD
	% of maternal deaths in project participant parish villages in last 6 months that have been investigated with verbal autopsy led by CONPAS	NO	MOH & CONPAS Records	Bi-Annual	Pending	TBD
	% of facility newborn deaths in last six months investigated with audit	NO	MOH & CONPAS Records	Bi-Annual	Pending	TBD
	% of newborn deaths in project participant parish villages in last 6 months that have been investigated with verbal autopsy	NO	MOH,CONPAS & TBA Records	Bi-Annual	NA	75%
Outcome Indicators	**Mortality**					
	Maternal Mortality Ratio (MMR—per 100,000 live births)	No	INEC (National Statistics and Census Office)	Bi-annual	Pending	NA
	Neonatal mortality rate	No	INEC	Bi-annual	Pending	NA
	Stillborn rate	No	INEC	Bi-annual	Pending	NA
	Infant mortality rate (IMR)	No	INEC	Bi-annual	Pending	NA
	Case-fatality rate for direct obstetric causes (per 100 severe obstetric complications) active project facilities	No	Facility Records	Quarterly	Pending	TBD
	Stillborn rate	No	Facility Records	Quarterly	Pending	TBD
	NMR (newborn mortality prior to discharge from facility)	No	Facility Records	Quarterly	Pending	TBD
	# of maternal deaths in last year community	No	TBA Survey / Records	Annual	Pending	TBD
	# of stillborns in last year community	No	TBA Survey / Records	Annual	Pending	TBD
	# of newborn deaths in last year community	No	TBA Survey / Records	Annual	Pending	TBD

Annex 8: ECUADOR CSHGP TRAINING PLAN (OVERVIEW):

Expected Result #1	Type of Training	Staff to be trained/ approximate numbers	Training objective	Year 1				Year 2				Year 3				Year 4			
				Q 1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Strategy #1 Strengthen high-impact maternal and neonatal community care, incorporating TBAs, health centers and EBAS	- Quarterly coordination and monitoring workshops on Community EONC, with TBAs, EBAS and Health Center staff.	- Parish-level healthcare micro-network: - Health Center Staff - TBAs	- Define/ strengthen coordinating mechanisms -Define each actor's role in Community-level EONC			**X**		**X**		**X**		**X**		**X**		**X**		**X**	
	- Workshops to train TBAs on early post-partum visits methodology, identification of danger signs and maternal and neonatal counseling, mapping of pregnant women and development of birth/obstetric emergencies plan Note: specific TBA skills to be prioritized are summarized in narrative text.	- TBAs (30 per workshop)	-Strengthen knowledge of identification of maternal-neonatal danger signs; -Strengthen maternal and child health counseling skills - Strengthen knowledge of community mapping of pregnant women, and development of birth/obstetric emergencies plan			**X**		**X**		**X**		**X**		**X**		**X**		**X**	

Strategy #2 Develop/strengthen communication and referral mechanisms among healthcare levels (community-level, 1st level, 2nd level)	- Quarterly referral and counter-referral coordination workshops with TBAs, micro-networks and Health Center staff ;	- Parish-level healthcare micro-network - TBAs (160) - Health Center Staff	-Learn and implement new referral and counter-referral system between healthcare levels - Monitor compliance with referral and counter-referral mechanisms from/to TBAs			**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Strategy #3 Improve relationships between health personnel, community health workers, and TBAs	- Quarterly workshops on intercultural health and improvement of patient-provider interpersonal relationships (Buen trato).	- Staff from parish-level micro-network - TBAs (160) -Community health workers (100) - Health Center Staff	-Sensitize health personnel on intercultural aspects and patient-provider interpersonal relationships.			**X**		**X**		**X**		**X**		**X**		**X**		**X**	
	- Annual workshops to promote exchange of maternal and neonatal knowledge between TBAs and health personnel		- Cross-cultural exchange between actors from the two healthcare systems			**X**				**X**				**X**				**X**	
Strategy #4 Actively engage community organizations	- Quarterly workshops/meetings with grass-roots organizations.	Leaders from community organizations (100) User committees (100)	- Strengthen knowledge on rights to citizen participation / oversight; Maternal & Child Health Policy		**X**		**X**		**X**		**X**		**X**		**X**		**X**		**X**

Expected Result #2	Type of Training	Staff to be trained/ approximate numbers	Training Objective	Year 1				Year 2				Year 3				Year 4			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Strategy #2	Training on counseling skills with emphasis on interpersonal skills and healthy maternal newborn behaviors, danger sign recognition, and prompt care-seeking for skilled providers and TBAs in 6 counties.	35 healthcare workers 160 TBAs 100 community health workers	Train health providers to develop counseling skills				X		X			X				X			
Strategy #3	Three HACAP workshops in Pujilí Canton (year 1); and Saquisilí, Salcedo, Pangua, La Maná and Latacunga Cantons (years 2, 3 and 4)	60 social actors and healthcare workers	Involve social actors in determining intercultural changes to be made to delivery care provided at health units in Pujilí County			X	X		X		X		X		X		X		X
Strategy #4	Train health personnel on citizen rights to quality healthcare in 6 cantons	35 healthcare workers	Train all health providers on citizen rights so they can communicate them to users in services and in the community				X			X				X				X	

Expected Result # 3	Type of Training	Staff to be trained/ approximate numbers	Training objective	Year 1				Year 2				Year 3				Year 4			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Strategy #2 Design/implement supervision and CQI mechanisms applied to TBAs' work	Training workshops on supervision, follow-up and CQI mechanisms applied to TBAs' work.	Health personnel from each parish-level micro-network	Health personnel (Physicians, nurses, midwives) will carry out supervision functions to improve quality of TBAs'work			X				X				X				X	
Strategy #3 Strengthen EONC knowledge/skills of health staff	Workshops to train staff and communicate skills for management of obstetric and neonatal complications	Physicians, nurses, midwives from each micro-network, county and provincial hospital	Health personnel will be capable of adequately solving and managing obstetric and neonatal complications according to level of complexity				X				X				X				X
Strategy # 4 Design/implement supervision and CQI mechanisms for healthcare facilities	Workshops to communicate supervision skills and CQI methods	CQI teams at each micro-network, canton and provincial hospital	CQI teams will apply CQI methods and improve care processes as a result			X		X		X		X		X		X		X	

DRAFT-updated 08.02.10
Operations Research Concept Paper
Child Survival and Health Grants Program, Ecuador Project

Section I: Background and Problem Statement

1.1. Problem statement

***Brief contextual Background and Problem Statement*:**

The Cotopaxi province in Ecuador, with 384,499 inhabitants, has a large rural population (67%)[1] a third of which is Ecuadorian Indian (28%) and the majority of which is poor (90%)[2], with poor access to and low utilization of evidence-based skilled maternal-newborn health care services. Maternal mortality rate reached 180 per 100,000 live births in 2007[3], and newborn mortality 12 per 1000 live births in 2006, among the highest in Ecuador's provinces. Almost half of all women in Cotopaxi and 71% of Indian women in the province delivered their babies at home in 2004, despite a national institutional delivery rate of 75% at the time. Most deliveries by Indian women are attended by a traditional birth attendant (TBA) with little or no formal training. Typically, the TBA attends the birth but does not routinely provide post-partum services to the woman or her newborn. In general, TBA services for newborns are very limited to non-existent. Home- or facility-based early post-partum services for women and their newborns in the Cotopaxi province are rare, due to numerous variables including a traditional 40 day post-partum confinement period; low rate of institutional delivery; geographic, cultural and economic barriers; and lack of national/regional post-partum care standards and advocacy. Even for women who do deliver in facilities, the woman and her newborn are typically discharged less than 24 hours after birth, with no systematic early post-partum follow of the mother and newborn at the facility. For women with recognized complications at the time of childbirth or during the post-partum period, coordination of care provided by TBAs and that provided by MOH and other institutional facilities is nonexistent for the most part.

It is well established that the majority of childbirth-related deaths for mothers and newborns occur in the immediate post-partum period and during the first week after birth. There is strong recent international evidence for the impact of community-based early post-partum intervention packages for reducing newborn mortality (Baqui et al, 2009; Bang et al, 2005; see references). Early post-partum intervention packages demonstrating outcome impact for newborns have usually included a combination of early post-partum home care by a trained health worker that includes counseling for household best practices, assessment for danger signs, prompt referral and in some cases home-based management of newborn illness or complications (e.g. sepsis, low-birth

[1] **INEC**, Censo de población y vivienda. Quito, Ecuador 2001

[2] **SIISE,** Indicadores Económicos y Sociales. Quito, Ecuador 2007.

[3] **Ministry of Health of Ecuador**, Basic Health Indicators. Quito, 2008.

weight); facility-based post partum care strengthening; and with varying success, community-based BCC interventions.

Problem Statement: Despite strong international evidence for the impact of community-based early post-partum care for improved outcomes for newborns, the majority of women and their newborns in the Cotopaxi province do not benefit from early post-partum care. Poor household compliance with healthy maternal newborn care practices, lack of home- or facility-based early post-partum services, delayed recognition of danger signs and care seeking and a lack of linkages and effective referral mechanisms between TBA home care and formal health system services all contribute to increased vulnerability for women and newborns in the first week after birth in the Cotopaxi province.

1.2. Proposed intervention(s) to address the problem and the expected result:

The intervention to be evaluated by the proposed operations research will seek to meet four primary objectives:

1. Introduce early post-partum home based care (within first 1-3 days) by trained TBA's or skilled parish health center workers (EBAS[4] teams where functioning) that includes high-quality counseling for best routine practices, assessment for and recognition of danger signs and referral of complications identified in mothers and newborns
2. Improve household knowledge and adherence with best practices, including danger sign recognition for mothers and newborns and prompt care-seeking or follow-through with referral for recognized post-partum maternal newborn complications.
3. Strengthen linkages between parish health centers and TBA's in parish health center catchment areas to increase coverage, quality and coordination of home- and facility-based post partum services with an emphasis on improving effective referrals.
4. Improve quality of parish health center early post-partum services for women and newborns as measured by compliance with evidence-based standards of assessment and treatment care, and referral to county or provincial hospital when indicated for identified complications

The intervention will be introduced at the parish level sequentially over the life of the project in an increasing # of counties in the Cotopaxi province. The primary unit of intervention to be evaluated by the OR will be the parish health center catchment area that includes the parish health center and TBA's and households in targeted villages within the parish health center catchment area. TBA's within intervention villages will receive competency-based training and supportive supervision to provide home-based early post-partum care services. The first-year TBA training will focus on the provision

[4] An EBAS team (Basic Health Care Team, by its Spanish name) is a new strategy of the Ministry of Health of Ecuador to expand coverage to underserved areas, consisting of an ambulatory team of a doctor, a nurse, a dentist, an auxiliary nurse who do home visits according to a pre-defined schedule.

of routine counseling for healthy maternal newborn household practices, danger sign recognition, and referral to parish health center when danger signs are identified. The second-year TBA training will focus on improving clinical assessment skills for prompt identification of complications in women and newborns and on strengthening referral counseling for improved referral compliance by families. Consideration will be given, pending results of earlier phases and discussion with MOH officials, to the introduction in later phases of the project TBA training in basic sepsis management and possibly neonatal resuscitation techniques under supervision of parish health center provider teams. TBAs will be supervised by parish health center staff and community stakeholders will be actively engaged in supporting TBAs to introduce post-partum home services. As sequential waves of parishes are targeted over the 5-year life of the project, veteran high-performing TBA's will be recruited as peer counselors and assistant trainers and high-performing parish center staff will be recruited as trainers and supervisors for new areas.

Parish-level maternal newborn QI teams will be formed that include parish health center maternal newborn health providers, trained TBA's in parish catchment area and key community stakeholders and partners. Parish MNH QI teams will be supported to meet on a regular basis (likely quarterly) to promote increasing coverage and quality of home-based early post-partum services by TBA's and EBAS (skilled providers), and to improve referral processes based on formal communication and agreed protocols between TBAs and parish center providers, including collaborative discussion and efforts to overcome identified client barriers to adherence with referrals. Obstacles faced by TBA's in delivering post-partum care will be reviewed regularly and the team will be taught to use QI methods to strengthen and measure results of improved home-based early post-partum care and referral processes at the parish level.

As the intervention is scaled up to sequential parishes and counties within the Cotopaxi province shared learning mechanisms will be promoted to disseminate lessons learned through active engagement of veteran early-phase parish health center staff, TBA's and other stakeholder participants. An explicit goal of this strategy will be to build capacity of a cadre of TBA and primary health center maternal newborn provider champions and leaders essential for scaling up and sustaining gains after the project ends. In addition to baseline and end line measurement of key intervention indicators, a minimum number of simple common indicators integral to the overall monitoring framework of the CHGSP will be monitored regularly in all intervention areas. These common indicator results will be shared regularly with County, Provincial (Cotopaxi) and national MOH officials to ensure ongoing engagement of key decision makers in the MOH.

The expected **results** of the intervention will include:

1. Improved coverage and quality of early post-partum home-based care at end line relative to baseline as measured by increased number of early post-partum home visits and improved competence of providers (TBA and skilled home-care providers) to demonstrate key elements of high-impact early post-partum care including: a) counseling for healthy household practices and danger sign

recognition for mother and newborn, b) provider knowledge and recognition of danger signs supported by basic clinical assessment skills, and 3) effective referral counseling of mothers and newborns with identified post-partum complications.

2. An increase at end line relative to baseline in household knowledge and self-reported practice of evidence-based practices, as measured by a) self-reported adherence with routine maternal newborn care practices, b) increased knowledge of maternal and newborn post-partum danger signs, c) improved self-reported care-seeking for recognized danger signs, and d) improved adherence with recommended referrals by home-based post-partum care providers (TBA's or skilled providers.)

3. Improved linkages at end line relative to baseline between trained TBA and parish health center staff as measured by increased number of communications/contact between TBA's and parish center staff, increased number of referrals, increased number of supportive supervision visits of TBA by parish center staff.

4. Improved utilization and quality at end line relative to baseline of parish health center early post-partum services for women and newborns as measured by utilization of parish health center early post-partum services and compliance of these services with evidence-based post-partum standards of care, including referral to county or provincial hospital for complications.

1.3. Gaps in evidence and knowledge:

Despite the fact that community agents provide a large proportion of maternal newborn care in the LAC region, especially among rural and poor women, the optimal role of community agents including TBAs in promoting evidence-based maternal newborn care and how best to coordinate such care with the formal health system remains undefined in most LAC countries. The debate about how to coordinate TBA and formal health system maternal newborn services is held mostly at a theoretical level with limited concrete operational experience that tests in practice how to make effective use of community agents' practical experience and closeness to the community for the delivery of high-impact home intervention packages like early post-partum care.

In addition to general gaps in evidence about how best to strengthen linkages between TBA and formal health system services, there is a specific gap in evidence and knowledge about how best to implement high-impact evidence-based early post-partum care in the Ecuador context. For the most part, early post-partum care for women and newborns in populations at greatest risk is non-existent despite strong international evidence for the effectiveness of such care, especially for newborns. There is limited understanding of the specific operational barriers that may exist at household, TBA and parish health center level to the introduction of early home-based post-partum care including provision of referrals by TBAs and adherence with referrals by families. The proposed research will include a formative phase that examines current barriers to and opportunitiesfor the introduction of early post-partum care including improved care-

seeking and follow-through with referrals for complications. The evaluative phase of the research will measure the impact of an early post-partum home-based intervention package designed to take advantage of opportunities and overcome barriers identified in the formative phase for improved coverage, quality and impact of home-based early post-partum care and associated referrals.

1.4. Justification for the proposed research

Ecuador and other LAC countries have made progress in reducing maternal and newborn mortality and morbidity, but national averages hide enormous in-country variation in mortality rates, which when unveiled show disadvantaged populations segments to have alarming rates of mortality. Ecuador and other LAC countries need to test effective strategies for the delivery of high-impact maternal newborn services for marginalized populations such as that of the Cotopaxi province, in order to meet MDGs 4 and 5. One such high-impact intervention package is home-based early post-partum care for mothers and newborns. Most evidence for the beneficial effects of early home-based care, however, has been demonstrated in the Asia region. There is a compelling need to evaluate operational models for the delivery of early post-partum care for vulnerable populations in the LAC region.

Recent regional LAC initiatives such as the Latin American Maternal Mortality Initiative (LAMM) and the LAC Newborn Alliance, supported by country MOH, USAID missions, bilateral partners and multilateral partners such as PAHO, UNFPA and UNICEF highlight the strong political will in the LAC region to develop policy and operational models for the delivery of high impact innovations demonstrated to reduce maternal and newborn mortality. Many country-level initiatives reflect the LAC regional momentum, including in Ecuador where the national MOH is strongly committed to supporting the development of operational models for bridging the gap between known best practices and effective delivery approaches to reach populations in greatest need. Ecuador, and other LAC countries with similar health care systems, needs practical operational demonstrations of improved coordination of community-and facility-based services for pregnancy, childbirth, and post-partum services for women and newborns, especially for women and newborns with complications. In particular, there is a commitment by the national MOH in Ecuador to strengthen services and outcomes for newborns, an area that has seen relatively slower progress. The proposed evaluative research will involve key stakeholders in Ecuador including the MOH, USAID mission, UNFPA, PAHO and other partners to evaluate an operational model for enhancing coverage and quality of high-impact post-partum care for mothers and newborns, including improved linkages between TBA's and parish health center services. In spite of legal instruments and a constitutional mandate to create a unified National Public Health Care System, Ecuador has made little progress in coordinating services between levels of care. As an organization with many years of experience working in close collaboration with the MOH to improve maternal newborn care in Ecuador, CHS is well positioned to leverage research findings for maximum policy and implementation impact at Ecuador country level and LAC regional level.

1. 5. Study location

The study will be conducted in the Cotopaxi province, a mountainous region in the Ecuadorean Andes, approximately 130 kilometers south from Quito. The province has 384,499 inhabitants and is comprised of seven counties, which in turn have 38 rural parishes. The study will be conducted in 21 rural parishes in the Cotopaxi province targeted to participate in the project according to two selection criteria associated with a high burden of maternal newborn mortality in Ecuador: 1) > 40% indigenous Indian population in parish, 2) > 50% extreme poverty level in parish.

1.6 Type of Study Design

The project will employ a pre-post intervention design in which results are compared at baseline (pre-intervention) and endline (post-intervention) with respect to key variables. There will be a strong emphasis on regular assessment of process indicators for process learning. For process and coverage indicators related to referral processes and provision of early post-partum care, consideration is being given to possible inclusion of a comparison arm of non-intervened parishes in the Cotopaxi province.

Section II: Formative Research and Process Learning

The overarching goal of the formative research and process learning component will be to guide data collection for design of the early implementation phases of the project and to guide ongoing data collection and analysis throughout the project to provide input for continuously improving implementation (process learning).

2.1 Objectives of formative research and process learning

1) Increase understanding of household, TBA and parish health center characteristics that influence:
    a. post-partum household priorities, care practices and care-seeking behaviors;
    b. home-based (TBA or skilled provider) and facility-based post-partum services;
    c. Referrals and linkages between home- and facility-based services, including between primary- and referral-level facilities.
2) Understand variations in household practices during implementation (*process learning*)
3) Understand variations in coverage, utilization and quality of home and facility-based services during implementation (*process learning*)
4) Understand variations in referral patterns between different levels of health system during implementation (*process learning*)

Overview of phases of formative research:

The initial phase of data collection for formative research objective 1 will take place from March-July 2010 to guide planning and implementation of the early phases of the intervention. Key sub-phases of this early phase include:

1. Baseline household survey to assess household knowledge and practices (data collection completed; analysis in progress)
2. Focus groups with TBA's and skilled parish health center and district hospital providers (in progress)
3. Baseline survey of individual TBA's and skilled providers to assess attitudes practices and knowledge with regard to targeted interventions (partially completed; ongoing)
4. Simulated case studies to assess baseline competency of TBA's and skilled providers with regard to targeted post-partum and referral interventions (in planning)

Subsequent phases of data collection will be tightly integrated with the ongoing project monitoring system to provide input to implementation structured per phases below:

1. Monthly and quarterly data collection relative to process learning objectives per Detailed Implementation Plan (DIP) monitoring framework and relevant indicators (*in process).*
2. Structured bi-annual review of project indicator results specific to OR process learning objectives (described above) to guide continuous improvement of implementation of the OR intervention.
3. Supplemental data collection: problems identified through the monitoring system such as low coverage, low quality, and failure to complete referrals will serve as the starting point for interviews, observation and case studies to investigate the reasons for the situation and make suggestions for improvement. Methods will include verbal and social autopsies of maternal and newborn deaths, focus groups with providers and users of services, and case studies of referral failures.
4. In-depth analysis of OR process learning objectives during mid-term evaluation.

.

2.11. Research *Question*s by Objective:

Objective 1: Increase understanding of household, TBA and parish health center characteristics that influence:

a. post-partum household care practices and care-seeking behaviors;
b. Home-based (TBA or skilled provider) and facility-based post-partum services;
c. Referrals and linkages between home- and facility-based services, including between primary and referral level facilities.

***Research questions for mothers**: to be collected via household baseline survey and focus groups with mothers:*

1. Greatest challenges of any kind described by mothers during first month after birth (*does not have to be related to health*)?
2. Do mothers think it is a good idea to breastfeed their newborns after birth?
    a. If yes, why?
    b. If no, why?
3. Do mothers think it is a good idea to given only breast milk to newborns after birth (no water or any other liquid)?
    a. If yes, why?
    b. If no, why?
4. Mother's description of what kinds of health services, if any, are most important to her in the first month after birth.
5. Mothers' perceptions of necessity for, availability of, and quality of care provided by closest parish health center during first weeks after birth for:
    a. themselves and
    b. their newborns
6. Mother's perceptions of necessity for, availability of, and quality of care available to be provided by TBA's during the month after birth for:
    a. Themselves
    b. Their newborns
7. What do mothers see as the most serious signs of illness in their newborns (danger signs)?
8. Where/from whom would a mother most prefer to ask for advice or help if she thinks that her newborn is ill?
9. How feasible is it for mothers to contact a TBA if they think they need care for themselves or their newborns?
10. Would mothers like for a nurse or a doctor from the parish health center to visit them at home during the several days after birth?
    a. If yes, why?
    b. If no, why not?
11. Would mothers like for a TBA to visit them in the first few days after a birth?
    a. If yes, why?
    b. If no, why not?
12. If a TBA told a mother that she needed to go to the health center because she was sick would she be able to do so?
    a. If yes, what would help her to do so?
    b. If no, what would be the main reasons that she would not go or the main obstacles that would prevent her from going if she wanted to?
13. If a TBA told a mother that she needed to go to a health center because her newborn was sick would she be able to do so?

a. If yes, what would help her to do so?
b. If no, what would be the main that she would not go, or the main obstacles that would prevent her from going?

14. Other, to be added as appropriate….

Research questions for TBA's: *to be collected via baseline TBA survey (individual questionnaires) and TBA focus groups:*

1. Do TBA's currently provide any post-partum care to women and newborns?
2. Do TBA's provide specific services for newborns in addition to women as part of childbirth or post-partum care? What specifically?
3. What is TBA's opinion of adding post-partum care for mothers and newborns to her current responsibilities? What would be the greatest obstacles for her providing home-based post-partum care? What would be the advantages to her?
4. What kinds of incentives would matter most to the TBA to help her to provide post-partum care (financial, training for new skills, professional advancement, opportunities, mode of transport, other)?
5. What is current status of TBA communication with parish health center? Does she know the name of any providers? Has she visited the center within past 6 months?
6. What is her perception of quality of care at parish health center?
7. Does she refer patients to parish health center? If yes, about how many within past 3 months?
8. Does she feel comfortable referring patients to parish health center?
9. What would help her most to have a better relationship with the parish health center?

Research Questions for Skilled providers based in parish health centers, including members of EBAS teams: *to be collected via baseline survey and skilled provider focus groups:*

1. How long after birth do women usually leave the parish health center?
2. What services are usually provided post-partum to the woman and her newborn after birth before she leaves the health center (e.g. newborn immunizations, newborn physical exam, family planning, etc.)
3. Does the parish health center provide any early post-partum services within first week of birth for women who have delivered at home or who are following up after a birth in the health center?
    a. If yes, how soon after birth are such services usually provided?
    b. What is the content of such services?
4. What if any community or home early post-partum services are currently provided by health care providers based in the parish health center?
5. Does the provider know the names of any TBA's in the villages served by the health center?
    a. If yes, how many TBA's do you know by name?
6. Do providers have any regular communication with TBA's?

    a. If yes, how often?
    b. With approximately how many TBA's do you have regular communication?
    c. What is the usual purpose of such communication?
    d. How does such communication usually occur?
7. Does the health center staff think that health center staff should have regular contact with TBA's?
    a. If yes, why?
    b. If no, why not?
8. What if any early post-partum tasks do you know of that TBA's or any CHW's in the parish health center catchment area provide?
9. Are there post-partum tasks that the health center provider thinks that a trained TBA or CHW could provide for pregnant women and newborns that would help to improve the health of women and their newborns?
10. Does health center staff ever provide training for TBA's?
    a. If yes, what kind of training?
11. Does health center staff ever supervise TBA's?
12. What are the greatest challenges that providers perceive TBA's to face in their catchment area?
13. In the provider's opinion, are CHW's able to recognize and identify complications for which a pregnant woman, recently delivered woman or newborn should be referred to the clinic most of the time?
14. Do TBA's ever refer women to the health center?
    a. If yes, on average how many women are referred per month?
15. What changes might help to improve the way in which TBA's refer home births to the health center?

Research Questions by process learning objectives:

Objective 2: Understand variations in household practices during implementation (*process learning*)

1. What if any change occurs in mothers' stated priorities for post-partum period during program implementation? How do expressed priorities change?
2. What, if any, household maternal newborn practices change during project implementation (e.g. exclusive breastfeeding, thermal protection of newborn, umbilical care, increased nutrition and rest for mother, etc.)? Which practices change the most and why? Which practices change the least and why?'
3. What if any changes occur in household recognition of maternal or newborn danger signs during implementation? Which kinds of danger signs are most easily recognized over time and why? Which are least recognized over time and why?

4. What if any changes occur in household care-seeking for perceived illness in mother or newborn during implementation? What are the main changes that occur and why or why not?
5. What if any changes occur in household adherence with referrals made by TBA's or skilled providers during home visits? What are the reasons for change or the reasons for lack of change from the family's perspective, the TBA's perspective, and the health center staff's perspective?
6. *Other…*

Objective 3: Understand variations in coverage, utilization and quality of home and facility-based services during implementation (*process learning*)

1. What variations occur in TBA home based post-partum services during implementation with regard to:
    a. #'s and household coverage of visits?
    b. Documentation of visits?
    c. Quality of services as measured by direct observation or by simulated case studies/
2. What variations occur in parish health center early post-partum health services during implementation with regard to:
    a. #'s and coverage?
    b. Quality of services as measured by compliance with high impact interventions as measured in medical record or by observation or simulation?
3. What variations occur in EBAS home-based early post-partum services during implementation with regard to:
    a. Timing of visits?
    b. #'s and coverage of visits?
    c. Quality of visits as measured by medical record review, observation or simulation?

Objective 4: Examine patterns of referral between different levels of the health system (household/TBA, parish, and district), understand reasons for lack of referral or failure to comply with referral, and provide on-going recommendations to strengthen the referral system (*process learning).*

1. What variations occur in referral patterns from TBA to parish health center with regard to:
    a. Frequency of any kind of communications between TBA's and health center staff/
    b. Total #/rate of referrals?
    c. Types of referrals (reasons for referrals)?
    d. Timing of referrals?

2. What variations occur in referral patterns between parish health centers and district or provincial hospitals with regard to:
    a. New or improved standardized referral protocols?
    b. Total #/rate of referrals?
    c. Types of referrals?
    d. Timing of referrals/
3. What variations occur in patterns of family compliance with referrals with regard to:
    a. Proportion of referrals adhered to?
    b. Timing of adherence? Does family follow up with referral within one day?
    c. Kinds of referrals with which families most likely to adhere?
    d. Reasons that families identify for adherence or non-adherence?
4. Other…

2.2 Methods for formative research and process learning:

Formative research Objective 1: Qualitative data will be collected through a series of structured focus groups with mothers, civil society members, TBA's and parish health center provider staff. Quantitative data will be collected via structured individual questionnaires administered to mothers, TBA's and skilled providers in parish health centers and district hospitals. Specific methods include:

1. Baseline household KPC survey (completed) addressing objective 1 formative research questions and has completed and is currently being analyzed.
2. Series of focus groups with TBA's and parish health center staff addressing key research questions relative to each group as outlined above (in progress)
3. Individual survey questionnaires administered to TBA's and skilled providers using a standard tool to assess the feasibility of a possible more extensive baseline survey of TBA's and skilled providers (in progress; April-July phase).
4. Simulated case studies to assess knowledge and competence of TBA's and skilled providers re: targeted interventions
5. Several referral case studies (TBA to primary health center and primary health center to hospital)

Process learning Objectives 2-4: Later phases of process learning will be tightly integrated with the project monitoring system as outlined in DIP (in progress). Problems identified through the monitoring system such as low coverage, low quality, and failure to complete referrals will serve as the starting point for interviews, observation and case studies to investigate the reasons for the situation and make suggestions for improvement. Methods will include verbal and social autopsies of maternal and newborn deaths, focus groups with providers and users of services, and case studies of referral failures.

2.3 Analysis Plan Formative research and Process Learning

Because the OR topic was chosen early on in the planning phase of the CHS CHGSP project it has been possible to integrate data needed for both formative and evaluative phases of the OR into the project baseline assessment and monitoring strategy. The evaluative research analysis plan (see below, section 3.6.4) includes a summary table of key OR indicators and the data source for each indicator as part of either the project baseline assessments or as part of ongoing project monitoring.

Formative research to inform and strengthen program design:

Pertinent baseline evaluative research quantitative OR indicators collected via household and TBA surveys and TBA competency evaluations using simulated case studies are summarized in Table I in section 3.6.4 below (e.g. household newborn care practices and TBA post-partum services at baseline). These indicator results are being closely analyzed for the formative phase of the OR to ensure that baseline quantitative results inform implementation planning with regard to identified gaps in household behavior and knowledge of best post-partum practices, TBA competence to deliver high-quality post-partum care, linkages between levels of care, and parish health center post-partum services.

Qualitative data obtained at baseline via focus groups with community members, TBAs and skilled providers/MOH managers are likewise being examined to help guide and strengthen proposed intervention approaches for increasing coverage and quality of TBA home-based early post-partum care, increasing household uptake of best practices, and improving communication between TBAs and parish health center staff for better coordinated management of post-partum routine care and non-routine post-partum complications for mother and newborn (e.g. sepsis.)

Ongoing process Learning:
OR-pertinent project indicators being collected as part of the project's overall monitoring strategy (see DIP Annex 2, M&E Table), will be systematically analyzed twice a year to evaluate progress relative to the four over-arching OR objectives. Any OR indicators that are identified to be lagging at the bi-annual review will be followed up with formative research designed to clarify reasons for lack of progress and to promote process learning. Depending on the area of identified lack of progress, formative research such as referral case studies, verbal autopsies of maternal/newborn deaths and focus groups will be undertaken to improve understanding of barriers to progress and to identify opportunities for strengthening program implementation to achieve desired OR results. The choice of data collection and analysis method for process learning will be driven in real time by the specific OR intervention area that is identified to be lagging during the bi-annual review of OR-relevant project indicators.

The greatest area of challenge for OR process learning is likely to be for OR result # 2, increased household adoption of post-partum best practices, since comprehensive household-level data will only be collected during baseline and end line surveys, unlike

TBA and health center service delivery data that will be part of routine project monitoring. Options will be explored, as funding permits, to allow for mid-project evaluation of progress toward result # 2, including a possible small-scale survey of household knowledge and practice in a sample of high and low-performing parishes to help generate process learning for OR result # 2.

2.4 How results will be used

Results will be used primarily to guide implementation planning and ongoing process learning for both the OR intervention and the larger project intervention. Results will also be leveraged for advocacy with key stakeholders, including community members, TBA's, providers, public health managers, and government including MOH.

Section III: Evaluative Research: objectives, research questions, and hypotheses

3.1. Objectives

1. Assess the coverage and quality achieved from the introduction of an evidence-based package of early post-partum home care for mothers and newborns, including early identification of post-partum maternal newborn complications and prompt referral for skilled facility care for complications.

2. Assess the level of adoption of behaviors resulting from implementation of an intervention to improve household maternal newborn best practices, including routine care practices, post-partum danger sign knowledge, and prompt care-seeking or compliance with referral for identified post-partum danger signs in mothers or newborns.

3. Assess the pattern of referrals and degree of compliance with referral resulting from an intervention to strengthen linkages between TBAs and parish health centers including improved referral processes and follow-through for women and newborns with identified post-partum complications.

4. Assess the coverage and quality achieved from an intervention to improve quality of facility-level parish health center early post-partum care for mothers and newborns, including improved referrals to provincial and county hospitals when complications are identified in mother or newborn.

3.2. Research questions

Objective 1:

1. Is the project able to introduce and achieve improved coverage of home-based early post-partum services for recently delivered women and their newborns in targeted

villages in the Cotopaxi province? *HH questionnaire: % of women who report home-based post-partum care within 2 days of delivery*

2. Is the project able to improve the quality of home-based post-partum services as measured by demonstrated TBA competence for standards-based routine counseling, danger sign/complication recognition, adherence with referral standards (and potentially adherence with home-based neonatal sepsis treatment standards)?

3. Is the project able to achieve TBA competence for basic clinical assessment skills for recognition of complications in recently-delivered women and their newborns?

Objective 2:

4. Is the project able to demonstrate improved self-reported household post-partum maternal newborn best practices, including self-reported routine practices (e.g. exclusive breastfeeding), knowledge of danger signs, appropriate care seeking, and adherence with referral recommendations among parents of children < age 2 ?

Ob jective 3:

5. Is the project able to demonstrate increased incidence of appropriate TBA referrals and family adherence with referral recommendations by TBA's or skilled providers providing home care?

6. Is the project able to demonstrate improved linkages between TBA's and parish health centers as measured by increased communication/contact between TBA's and parish health center staff, increased referrals to parish health center by TBA's, and increased frequency of supportive supervision of TBA's by parish health center staff?

Objective 4:

7. Is the project able to demonstrate improved quality of parish health center early post-partum services (routine and complications care) as measured by compliance with evidence-based standards and measured patient outcomes in participating facilities

Cross-cutting question:

What is the relationship and interaction between different elements of the intervention and within different parishes with regard to coverage and quality of post-partum services, household adoption of best practices and referral patterns? These relationships will be analyzed using process documentation, project monitoring framework and HIS data. Statistical determinations about these relationships would not be possible, but it would be possible to look at tendencies and trends.

3.3 Hypotheses:

1. The proposed intervention will improve at end line relative to baseline the coverage and quality of home-based early post-partum care for mothers and newborns as measured by number of post-partum visits provided by trained TBA's and skilled providers (EBAS) and observed competence of TBA's and skilled providers.

2. The proposed project intervention will lead to improved household maternal newborn best practices as measured by an increase at end line relative to baseline of self-reported household maternal newborn care practices, parental knowledge of danger signs, appropriate care-seeking for danger signs and improved adherence with referrals for complications.

3. The proposed project intervention will strengthen linkages between TBA home- and facility-based post partum services as measured by an increase at end line relative to baseline in self-reported communications/contact between TBA and parish center providers, increased # of referrals by TBA's, and increased family adherence with home-care referrals.

4. The proposed project strategy will improve quality of parish health center post partum services for mothers and newborns as measured by an increase at end line relative to baseline in facility care compliance with post-partum care standards, including hospital referral when indicated.

3.4. Study arms

The intervention study arm will be the project parishes targeted by the Ecuador child survival project. The intervention arm will include all counties and parishes in the Cotopaxi province in which the intervention will be sequentially implemented over the course of the five-year project.

Note: One potential confounder in the proposed OR design will be an inability to distinguish between the effect of the project-wide community BCC intervention and the home-based post-partum care intervention (focus of OR) on key coverage, process and outcome measures. It is beyond the scope of the OR to analyze the community BCC in depth or to stratify intervention types by study arm. However, the analysis plan will need to take into account the potential confounding influence of the BCC intervention in the intervention study arm and the results section will need to mention the potential influence of the BCC intervention.

3.5. Study populations

There will be three study populations evaluated at baseline and endline:

1) Parents from households with a child aged 2 and under
2) TBA's (TBA providers and possible CHW pictorial record at endline)
3) Parish health centers (providers and facility clinical records), including EBAS teams who provide post-partum home-visits

Note: Because the primary intervention is focused on strengthening coverage, quality and linkages of home- and facility-based early post-partum services, TBA and household study populations will be sampled only in catchment areas of sampled parish health centers. *Note: The next version of the concept paper (as we finalized DIP and KPC report) will include specific information on parish health center catchment areas to be included for the OR, including geographic location and # of facilities and CHW's in individual catchment areas. We are in process of finalizing this selection based on catchment areas sampled as part of baseline household assessment.*

3.6 Evaluation Methods:

3.6.1 Sampling:

The parish will be taken as the primary unit of sampling. XX rural parishes in the Cotopaxi province will be sampled (the OR will assess the intervention in rural parishes only.) From the catchment area of each parish health center, a random sample of 19 households will be selected for the household survey for a total of xx households. One challenge will be the lack of population data for individual communities within each parish and the significant variation in number and population density of communities within individual parishes. Household sampling will be calculated using the best population census data possible (probably parish level data) and will be consistently calculated across all intervention and control parishes to mitigate lack of precise community-level population data. A random sample of TBA's among all TBA's known to work in sampled communities in individual parishes will be interviewed in each parish. All parish health centers in the sampled parish health center catchment areas in the Cotopaxi and control province will be sampled.

3.6.2 Information Collection Methods:

Baseline and end line data will be collected via survey individual questionnaires and structured focus groups with three populations in sampled parish health center catchment areas:

1) Households (primarily mothers)
2) TBA's
3) Parish ambulatory health center skilled providers

In addition to individual questionnaires to assess knowledge, practice and attitudes, quality of post-partum care will be assessed via simulated case studies of early post-partum consultations (home and facility-base) that evaluates competency of TBA's and skilled providers with regard to targeted post-partum and referral interventions. TBA competence for achieving post-partum care standards will be assessed via quarterly simulated case studies of home-based early post-partum care that assesses TBA

counseling, physical assessment, and complication/danger sign (mother and newborn) recognition skills. Quality of care at the facility level will be assessed via quarterly medical chart review in participating facilities in each county. Medical records will be randomly reviewed for adherence of care with specific post-partum care standards, using a standardized checklist. Average compliance per reviewed chart with designated standards will be aggregated across facilities at parish, county and province level. Outcome data relevant to quality of facility-level post-partum care will be monitored via monthly project facility indicators: post-partum hemorrhage and newborn mortality prior to discharge.

In addition to baseline and end line data collection via survey, focus group and simulated case studies, there will be ongoing collection and monitoring of data related to key evaluation research questions as an integral piece of the project's monitoring framework. Key OR indicators related to coverage, quality, care-seeking and referral practices will be regularly collected and analyzed as a routine project monitoring activity that will in turn inform regular process learning. The DIP monitoring framework will explicitly highlight indicators, data collection sources and methods relative to both project and OR indicators, since the intervention to be evaluated by the OR is one key project intervention. Process documentation measures relative to different pieces of the intervention will be analyzed as a whole to increase understanding of the interaction between different project elements.

The household questionnaire will measure the main coverage, process and outcome indicators for household. The TBA questionnaire will measure coverage and process indicators including number of early post-partum home visits in last month(s), number of referrals of women and newborns with post-partum complications in last month(s), and communication with parish health center workers in last month(s). The parish ambulatory health center questionnaire will measure quality of care, referral and outcome indicators of facility post-partum maternal newborn services as well as intermediate variables related to linkages with TBA's and county/provincial hospitals such as level of communication and contact with TBA's and hospital providers. In addition to information collected via baseline and end line surveys with mothers (household), TBA's and skilled providers, ongoing process documentation will highlight changing results for coverage, utilization, quality and referral indicators as well as qualitative data elicited via formative research process measure data collection using case studies, verbal autopsies and other innovative qualitative data collection methods as appropriate (see process learning analysis plan in section 2.3 above.)

3.6.3 Timing and Frequency of information collection:

Evaluation research question data will be collected at baseline and end line of the project intervention as described above. In addition, coverage, quality and process indicators (e.g. number of post-partum home visits by TBA's; number of referrals) will be measured on a regular basis an integral part of the project's monitoring framework to guide continuous improvement of the intervention and also for advocacy purposes with key

MOH, community and partner stakeholders and decision makers. Annex 2 of the DIP summarizes frequency of data collection for key OR indicators.

3.6.4 Analysis Plan Evaluative research

As mentioned earlier, because the OR topic was chosen early on in the planning phase of the project it has been possible to integrate data needed for both formative and evaluative phases of the OR into the overall project baseline assessments and monitoring strategy so that OR-specific data is included in general project data collection as described in methods section above. Data for analysis of the evaluative research will be primarily quantitative, taken from baseline TBA and household surveys and project monitoring indicators (see DIP, Annex 2, M&E table.)

Depending on the research question and population of interest, the units of analysis for the evaluative research will be the Individual County, parish, facilities, and TBAs. Data will be aggregated at TBA, facility, parish and county level; individuals will not be identified. Facility-level data will be aggregated also by specific facility type: parish ambulatory health center, private centers, county hospitals, and others as appropriate. Quantitative analyses will include the reporting of percentages, percent distribution, means and medians as appropriate.

Table I summarizes the specific evaluative OR indicators and data source that will be used to analyze the results for each evaluative research question categorized by research objectives:

Table 1: Indicators summarized by Evaluation Research Question:

Research Question	**Indicator**	
	Description	Source
Objective 1: Assess the coverage and quality achieved from the introduction of an evidence-based package of early post-partum home care for mothers and newborns, including early identification of post-partum maternal newborn complications and prompt referral for skilled facility care for complications.		
(1) Is the project able to introduce and achieve improved coverage of home-based early post-partum services for recently delivered women and their newborns in targeted villages in Cotopaxi?	% of mothers with children 0-23 mos. who report home post-partum visit within 2 days of birth after a facility or home birth.	HH questionnaire (baseline and end line)
	% of TBAs who report providing post-partum visit within first 2 days of birth (for home or facility birth)	TBA survey (baseline and end line)
	# of early post-partum visits (1st 3 days) made by project parish TBAs in last quarter	TBA record and TBA supervision reports (quarterly)

(2) Is the project able to improve the quality of home-based post-partum services as measured by demonstrated TBA knowledge and competence for standards-based routine counseling, danger sign/complication recognition, and adherence with referral standards?	% of TBAs able to cite at least 2 post-partum danger signs for mother	TBA survey (baseline and end line)
	% of TBAs able to cite at least 2 post-partum danger signs for newborn	
	% of TBAs able to cite at least 2 newborn care best practices	
	% of TBAs in each parish with more than 75% adherence with a set of evidence-based post-partum counseling standards for mothers and newborns	Direct observation or simulated TBA post-partum counseling (bi-annual)
Is the project able to achieve TBA competence for basic clinical care assessment skills (for recognition of complications in recently delivered women and their newborns)?	% average TBA compliance with post-partum newborn examination standards for identification of danger signs by observation or simulation of real-newborn physical exam	Simulated TBA clinical assessment of newborn (quarterly)
Objective 2: Assess the level of adoption of behaviors resulting from implementation of an intervention to improve household maternal newborn best practices, including routine care practices, post-partum danger sign knowledge, and compliance with referral for identified danger signs in mothers or newborns.		
Is the project able to demonstrate improved self-reported household post-partum maternal newborn best practices, including self-reported routine practices, knowledge of danger signs, and adherence with referral recommendations among parents of children < 2?	% of mothers of children age 0-23 mos. who report BF w/in first hour after birth	HH survey questionnaire (baseline and end line)
	% of mothers of children 0-23 mos. who can name two newborn danger signs.	
	% of mothers of children 0-23 mos. who can name two post-partum maternal danger signs	
	% of mothers of children 0-23 mos. who followed through on referral by TBA for post-partum complication for newborn	Project Indicator: TBA records (quarterly)
Objective 3: Assess the pattern of referrals and degree of compliance with referral resulting from an intervention to strengthen linkages between TBAs and parish health centers including improved referral processes and follow-through for women and newborns with identified post-partum complications.		
(1) Is the project able to demonstrate increased incidence of TBA referrals and family adherence with referral recommendations by TBA's or skilled providers providing home post-partum care?	# of newborns referred to health center or county hospital by TBA within past quarter	TBA record and/or TBA supervision record (quarterly)
	# of women post-partum referred to health center of county hospital by TBA within past quarter	
	# of households that report adherence with TBA referral	HH questionnaire survey (baseline and end line)
(2) Is the project able to demonstrate improved	% of TBAs who report to know how to contact a skilled provider at nearest heath center	TBA survey

linkages between TBAs and parish health centers as measured by increased communication/contact between TBAs and parish health center staff, increased referrals to parish health centers by TBA's and increased frequency of supportive supervision of TBA's by parish health center staff?	% of TBAs who report to have visited health center in last 3 months.	(annual if possible)
	% of TBAs who report a supervision visit by a parish health center skilled provider in last 3 months.	
	% of women treated for a maternal (intapartum or postpartum) complication in parish health centers and county hospital referred by TBA.	Parish health center records (quarterly)
	% of newborns treated for a complication in parish health center referred by TBA	
Objective 4: Assess the coverage and quality achieved from an intervention to improve quality of facility-level parish health center early post-partum care for mothers and newborns, including improved referrals to provincial and county hospitals when complications are identified in mother or newborn.		
(1) Is the project able to demonstrate improved quality of parish health center early post-partum services as measured by compliance with evidence-based standards and measured patient outcomes in participating facilities?	% of births benefitting from AMTSL in participating facilities	Project facility indicator (quarterly) *Review of random sample of charts per facility aggregated across facilities*
	% of births demonstrating compliance with Essential Newborn Care standards in participating facilities	
	Post-partum hemorrhage rate	
	Newborn mortality rate prior to discharge from facility	

References:

Ahluwalia I.B, Schmid T., Kouletio M., Kanenda O. An evaluation of a community-based approach to safe motherhood in northwestern Tanzania. *International J of Gynecology and Obstetrics* 82 (2003) 231-240.

Awasthi S, Verma T, Agarwal M. Danger signs of neonatal illnesses: Perceptions of caregivers and health workers in northern India. *Bull World Health Organ* 2006; **84:** 819–26.

Bang AT, Reddy HM, Deshmukh MD, Baitule SB, Bang RA. Neonatal and infant mortality in the ten years (1993 to 2003) of the Gadchiroli field trial: effect of home-based neonatal care. *J Perinatol* 2005; **25** (suppl 1)**:** S92–107.

Bang AT, Bang RA, Baitule SB, Reddy MH, Deshmukh MD. Effect of home-based neonatal care and management of sepsis on Neonatal mortality: field trial in rural India. *Lancet* 1999; **354:** 1955–61.

Bang AT, Bang RA, Reddy MH, et al. Simple clinical criteria to identify sepsis or pneumonia in neonates in the community needing treatment or referral. *Pediatr Infect Dis J* 2005; **24:** 335–41.

Baqui, et al. Effect of a Community-based newborn care intervention package implemented through two service delivery strategies in Syhlet District, Bangladesh: a cluster-randomized control trial. *Lancet*, 2009.

Berry N.S. Kaqchikel midwives, home births, and emergency obstetric referrals in Guatemala: Contextualizing the choice to stay at home. *Social Science & Medicine* 62 (2006) 1958-1969.

Bryce J, Boschi-Pinto C, Shibuya K, Black RE. WHO estimates of the causes of death in children. *Lancet* 2005; **365:** 1147–52.

Bhutta ZA, Memon ZA, Soffi S, Salat MS, Cousens S, Martines J. Implementing community-based perinatal care: results from a pilot study in rural Pakistan. Bull World Health Organ 2008;86:452-459

Bhutta ZA, Darmstadt GL, Hasan BS, Haws RA. Community-based interventions for improving perinatal and neonatal health outcomes in developing countries: a review of the evidence. *Pediatrics* 2005; **115** (suppl 2)**:** 519–617.

Carlo WA, Jehan I, Chomba E, Tshefu A, Garces A, Sailajan, Paridaandan,Alkthabe F, McClure EM, Derman RJ, Goldenberg RL, Bose C, Krebs NF, Panigrahi P,Buekens P,

Chakraborty H, Hartwell TD, Wright LL, Newborn-Care Training and Perinatal Mortality in Developing Countries, N Engl J Med 362:614, February 18, 2010

Daga SR, Daga AS, Dighole RV, Patil RP. Anganwadi worker's participation in rural newborn care. *Indian J Pediatr* 1993; **60:** 627–30.

Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, de Bernis L. Evidence-based, cost-effective interventions: how many newborn babies can we save? Lancet 2005;365:977-988.

Darmstadt GL, Hossain MM, Jana AK, et al. Determination of extended-interval gentamicin dosing for neonatal patients in developing countries. *Pediatr Infect Dis J* 2007; **26:** 501–07.

Haines A, Sanders D, Lehmann U, Achieving child survival goals: potential contribution of community health workers. *Lancet* 2007; **369:** 2121–31.

Haws RA, Thomas AL, Bhutta ZA, Darmstadt GL. Impact of packaged interventions on neonatal health: a review of the evidence.*Health Policy Plan* 2007; **22:** 193–215.

Hill Z, Kirkwood B, Edmond K. Family and community practices that promote child survival, growth and development: a review of the evidence. Geneva: World Health Organisation; 2001.

Jokhio AH, Winter HR, Cheng KK. An intervention involving traditional birth attendants and perinatal and maternal mortality in Pakistan. *N Engl J Med* 2005; **352** (20)**:** 2091–99.

Kalter HD, Salgado R, Moulton LH, Nieto P, Contreras A, Egas ML, Black RE. Factors constraining adherence to referral advice for severely ill children managed by the Integrated Management of Childhood Illness approach in Imbabura Province, Ecuador. *Acta Paediatr* 92: 103-110. 2003.

Lawn JE, Cousens S, Zupan J. 4 million neonatal deaths: when? where? why? *Lancet* 2005; **365:** 891–900.

Manandhar DS, Osrin D, Shrestha BP, et al. Eff ect of a participatory intervention with women's groups on birth outcomes in Nepal: cluster-randomised controlled trial. *Lancet* 2004; **364:** 970–79.

Mohan P, Iyengar S, Brahmawar S, Sen K. Auxialiary Nurse Midwife: What determines her place of residence? *Journal of Health & Population in Developing Countries,* Department of Health Policy and Administration, School of Public Health, University of North Carolina at Chapel Hill, June 2003.

Murray S.F, Pearson S.C. Maternity referral systems in developing countries: Current knowledge and future research needs. *Social Science and Medicine* 62 (2006) 2205-2215.

Parkhurst, O.J., Rahman, S.A. Non-professional health practioners and referrals to facilities: lessons from maternal care in Bangladesh. *Health Policy and Planning* 2007:**22**:149-155.

Perreira, K., Bailey, P., de Bocaletti., Hurtado E., Recinos de Villagran, S., Matute, J. *Maternal Child Health J, Vol. 6, No. 1, March 2002.*

Pratinidhi A, Shah U, Shrotri A, Bodhani N. Risk-approach strategy in neonatal care. *Bull World Health Organ* 1986; **64:** 291–7.

Senarath U, Fernando DN, Rodrigo I. Newborn care practices at home: effect of a hospital-based intervention in Sri Lanka. *J Trop Pediatr* 2007;53:113-118.

Senarath U, Fernando DN, Rodrigo I. Effect of training care providers on practice of essential newborn care in hospitals in Sri Lanka. *J Obstet Gynecol Neonatal Nursing* 2007;36:531-541

Sibley L, Caleb-Varkey L, Upadhyay J, Prasad R, Saroha E, Bhatla N, Paul V. Recognition of and Response to Postpartum Hemorrhage in Rural Northern India. *Journal of Midwifery & Women's Health.* Vol. 50, No.4, 2005.

Young Infants Clinical Signs Study Group. Clinical signs that predict severe illness in children under age 2 months: a multicentre study. *Lancet* 2008; **371:** 135–42.

Winch PJ, Alam MA, Akther A, et al. Local understandings of vulnerability and protection during the neonatal period in Sylhet District, Bangladesh: a qualitative study. *Lancet* 2005; **366**: 478–85.

de Zoysa I, Bhandari N, Akhtari N, Bhan MK. Careseeking for illness in young infants in an urban slum in India. *Soc Sci Med* 1998; **47:** 2101–11.

DRAFT-updated 08.02.10
Operations Research Concept Paper
Child Survival and Health Grants Program, Ecuador Project

Section I: Background and Problem Statement

1.1. Problem statement

***Brief contextual Background and Problem Statement*:**

The Cotopaxi province in Ecuador, with 384,499 inhabitants, has a large rural population (67%)[1] a third of which is Ecuadorian Indian (28%) and the majority of which is poor (90%)[2], with poor access to and low utilization of evidence-based skilled maternal-newborn health care services. Maternal mortality rate reached 180 per 100,000 live births in 2007[3], and newborn mortality 12 per 1000 live births in 2006, among the highest in Ecuador's provinces. Almost half of all women in Cotopaxi and 71% of Indian women in the province delivered their babies at home in 2004, despite a national institutional delivery rate of 75% at the time. Most deliveries by Indian women are attended by a traditional birth attendant (TBA) with little or no formal training. Typically, the TBA attends the birth but does not routinely provide post-partum services to the woman or her newborn. In general, TBA services for newborns are very limited to non-existent. Home- or facility-based early post-partum services for women and their newborns in the Cotopaxi province are rare, due to numerous variables including a traditional 40 day post-partum confinement period; low rate of institutional delivery; geographic, cultural and economic barriers; and lack of national/regional post-partum care standards and advocacy. Even for women who do deliver in facilities, the woman and her newborn are typically discharged less than 24 hours after birth, with no systematic early post-partum follow of the mother and newborn at the facility. For women with recognized complications at the time of childbirth or during the post-partum period, coordination of care provided by TBAs and that provided by MOH and other institutional facilities is nonexistent for the most part.

It is well established that the majority of childbirth-related deaths for mothers and newborns occur in the immediate post-partum period and during the first week after birth. There is strong recent international evidence for the impact of community-based early post-partum intervention packages for reducing newborn mortality (Baqui et al, 2009; Bang et al, 2005; see references). Early post-partum intervention packages demonstrating outcome impact for newborns have usually included a combination of early post-partum home care by a trained health worker that includes counseling for household best practices, assessment for danger signs, prompt referral and in some cases home-based management of newborn illness or complications (e.g. sepsis, low-birth

[1] **INEC**, Censo de población y vivienda. Quito, Ecuador 2001

[2] **SIISE,** Indicadores Económicos y Sociales. Quito, Ecuador 2007.

[3] **Ministry of Health of Ecuador**, Basic Health Indicators. Quito, 2008.

weight); facility-based post partum care strengthening; and with varying success, community-based BCC interventions.

Problem Statement: Despite strong international evidence for the impact of community-based early post-partum care for improved outcomes for newborns, the majority of women and their newborns in the Cotopaxi province do not benefit from early post-partum care. Poor household compliance with healthy maternal newborn care practices, lack of home- or facility-based early post-partum services, delayed recognition of danger signs and care seeking and a lack of linkages and effective referral mechanisms between TBA home care and formal health system services all contribute to increased vulnerability for women and newborns in the first week after birth in the Cotopaxi province.

1.2. Proposed intervention(s) to address the problem and the expected result:

The intervention to be evaluated by the proposed operations research will seek to meet four primary objectives:

1. Introduce early post-partum home based care (within first 1-3 days) by trained TBA's or skilled parish health center workers (EBAS[4] teams where functioning) that includes high-quality counseling for best routine practices, assessment for and recognition of danger signs and referral of complications identified in mothers and newborns
2. Improve household knowledge and adherence with best practices, including danger sign recognition for mothers and newborns and prompt care-seeking or follow-through with referral for recognized post-partum maternal newborn complications.
3. Strengthen linkages between parish health centers and TBA's in parish health center catchment areas to increase coverage, quality and coordination of home- and facility-based post partum services with an emphasis on improving effective referrals.
4. Improve quality of parish health center early post-partum services for women and newborns as measured by compliance with evidence-based standards of assessment and treatment care, and referral to county or provincial hospital when indicated for identified complications

The intervention will be introduced at the parish level sequentially over the life of the project in an increasing # of counties in the Cotopaxi province. The primary unit of intervention to be evaluated by the OR will be the parish health center catchment area that includes the parish health center and TBA's and households in targeted villages within the parish health center catchment area. TBA's within intervention villages will receive competency-based training and supportive supervision to provide home-based early post-partum care services. The first-year TBA training will focus on the provision

[4] An EBAS team (Basic Health Care Team, by its Spanish name) is a new strategy of the Ministry of Health of Ecuador to expand coverage to underserved areas, consisting of an ambulatory team of a doctor, a nurse, a dentist, an auxiliary nurse who do home visits according to a pre-defined schedule.

of routine counseling for healthy maternal newborn household practices, danger sign recognition, and referral to parish health center when danger signs are identified. The second-year TBA training will focus on improving clinical assessment skills for prompt identification of complications in women and newborns and on strengthening referral counseling for improved referral compliance by families. Consideration will be given, pending results of earlier phases and discussion with MOH officials, to the introduction in later phases of the project TBA training in basic sepsis management and possibly neonatal resuscitation techniques under supervision of parish health center provider teams. TBAs will be supervised by parish health center staff and community stakeholders will be actively engaged in supporting TBAs to introduce post-partum home services. As sequential waves of parishes are targeted over the 5-year life of the project, veteran high-performing TBA's will be recruited as peer counselors and assistant trainers and high-performing parish center staff will be recruited as trainers and supervisors for new areas.

Parish-level maternal newborn QI teams will be formed that include parish health center maternal newborn health providers, trained TBA's in parish catchment area and key community stakeholders and partners. Parish MNH QI teams will be supported to meet on a regular basis (likely quarterly) to promote increasing coverage and quality of home-based early post-partum services by TBA's and EBAS (skilled providers), and to improve referral processes based on formal communication and agreed protocols between TBAs and parish center providers, including collaborative discussion and efforts to overcome identified client barriers to adherence with referrals. Obstacles faced by TBA's in delivering post-partum care will be reviewed regularly and the team will be taught to use QI methods to strengthen and measure results of improved home-based early post-partum care and referral processes at the parish level.

As the intervention is scaled up to sequential parishes and counties within the Cotopaxi province shared learning mechanisms will be promoted to disseminate lessons learned through active engagement of veteran early-phase parish health center staff, TBA's and other stakeholder participants. An explicit goal of this strategy will be to build capacity of a cadre of TBA and primary health center maternal newborn provider champions and leaders essential for scaling up and sustaining gains after the project ends. In addition to baseline and end line measurement of key intervention indicators, a minimum number of simple common indicators integral to the overall monitoring framework of the CHGSP will be monitored regularly in all intervention areas. These common indicator results will be shared regularly with County, Provincial (Cotopaxi) and national MOH officials to ensure ongoing engagement of key decision makers in the MOH.

The expected **results** of the intervention will include:

1. Improved coverage and quality of early post-partum home-based care at end line relative to baseline as measured by increased number of early post-partum home visits and improved competence of providers (TBA and skilled home-care providers) to demonstrate key elements of high-impact early post-partum care including: a) counseling for healthy household practices and danger sign

recognition for mother and newborn, b) provider knowledge and recognition of danger signs supported by basic clinical assessment skills, and 3) effective referral counseling of mothers and newborns with identified post-partum complications.

2. An increase at end line relative to baseline in household knowledge and self-reported practice of evidence-based practices, as measured by a) self-reported adherence with routine maternal newborn care practices, b) increased knowledge of maternal and newborn post-partum danger signs, c) improved self-reported care-seeking for recognized danger signs, and d) improved adherence with recommended referrals by home-based post-partum care providers (TBA's or skilled providers.)

3. Improved linkages at end line relative to baseline between trained TBA and parish health center staff as measured by increased number of communications/contact between TBA's and parish center staff, increased number of referrals, increased number of supportive supervision visits of TBA by parish center staff.

4. Improved utilization and quality at end line relative to baseline of parish health center early post-partum services for women and newborns as measured by utilization of parish health center early post-partum services and compliance of these services with evidence-based post-partum standards of care, including referral to county or provincial hospital for complications.

1.3. Gaps in evidence and knowledge:

Despite the fact that community agents provide a large proportion of maternal newborn care in the LAC region, especially among rural and poor women, the optimal role of community agents including TBAs in promoting evidence-based maternal newborn care and how best to coordinate such care with the formal health system remains undefined in most LAC countries. The debate about how to coordinate TBA and formal health system maternal newborn services is held mostly at a theoretical level with limited concrete operational experience that tests in practice how to make effective use of community agents' practical experience and closeness to the community for the delivery of high-impact home intervention packages like early post-partum care.

In addition to general gaps in evidence about how best to strengthen linkages between TBA and formal health system services, there is a specific gap in evidence and knowledge about how best to implement high-impact evidence-based early post-partum care in the Ecuador context. For the most part, early post-partum care for women and newborns in populations at greatest risk is non-existent despite strong international evidence for the effectiveness of such care, especially for newborns. There is limited understanding of the specific operational barriers that may exist at household, TBA and parish health center level to the introduction of early home-based post-partum care including provision of referrals by TBAs and adherence with referrals by families. The proposed research will include a formative phase that examines current barriers to and opportunitiesfor the introduction of early post-partum care including improved care-

seeking and follow-through with referrals for complications. The evaluative phase of the research will measure the impact of an early post-partum home-based intervention package designed to take advantage of opportunities and overcome barriers identified in the formative phase for improved coverage, quality and impact of home-based early post-partum care and associated referrals.

1.4. Justification for the proposed research

Ecuador and other LAC countries have made progress in reducing maternal and newborn mortality and morbidity, but national averages hide enormous in-country variation in mortality rates, which when unveiled show disadvantaged populations segments to have alarming rates of mortality. Ecuador and other LAC countries need to test effective strategies for the delivery of high-impact maternal newborn services for marginalized populations such as that of the Cotopaxi province, in order to meet MDGs 4 and 5. One such high-impact intervention package is home-based early post-partum care for mothers and newborns. Most evidence for the beneficial effects of early home-based care, however, has been demonstrated in the Asia region. There is a compelling need to evaluate operational models for the delivery of early post-partum care for vulnerable populations in the LAC region.

Recent regional LAC initiatives such as the Latin American Maternal Mortality Initiative (LAMM) and the LAC Newborn Alliance, supported by country MOH, USAID missions, bilateral partners and multilateral partners such as PAHO, UNFPA and UNICEF highlight the strong political will in the LAC region to develop policy and operational models for the delivery of high impact innovations demonstrated to reduce maternal and newborn mortality. Many country-level initiatives reflect the LAC regional momentum, including in Ecuador where the national MOH is strongly committed to supporting the development of operational models for bridging the gap between known best practices and effective delivery approaches to reach populations in greatest need. Ecuador, and other LAC countries with similar health care systems, needs practical operational demonstrations of improved coordination of community-and facility-based services for pregnancy, childbirth, and post-partum services for women and newborns, especially for women and newborns with complications. In particular, there is a commitment by the national MOH in Ecuador to strengthen services and outcomes for newborns, an area that has seen relatively slower progress. The proposed evaluative research will involve key stakeholders in Ecuador including the MOH, USAID mission, UNFPA, PAHO and other partners to evaluate an operational model for enhancing coverage and quality of high-impact post-partum care for mothers and newborns, including improved linkages between TBA's and parish health center services. In spite of legal instruments and a constitutional mandate to create a unified National Public Health Care System, Ecuador has made little progress in coordinating services between levels of care. As an organization with many years of experience working in close collaboration with the MOH to improve maternal newborn care in Ecuador, CHS is well positioned to leverage research findings for maximum policy and implementation impact at Ecuador country level and LAC regional level.

1. 5. Study location

The study will be conducted in the Cotopaxi province, a mountainous region in the Ecuadorean Andes, approximately 130 kilometers south from Quito. The province has 384,499 inhabitants and is comprised of seven counties, which in turn have 38 rural parishes. The study will be conducted in 21 rural parishes in the Cotopaxi province targeted to participate in the project according to two selection criteria associated with a high burden of maternal newborn mortality in Ecuador: 1) > 40% indigenous Indian population in parish, 2) > 50% extreme poverty level in parish.

1.6 Type of Study Design

The project will employ a pre-post intervention design in which results are compared at baseline (pre-intervention) and endline (post-intervention) with respect to key variables. There will be a strong emphasis on regular assessment of process indicators for process learning. For process and coverage indicators related to referral processes and provision of early post-partum care, consideration is being given to possible inclusion of a comparison arm of non-intervened parishes in the Cotopaxi province.

Section II: Formative Research and Process Learning

The overarching goal of the formative research and process learning component will be to guide data collection for design of the early implementation phases of the project and to guide ongoing data collection and analysis throughout the project to provide input for continuously improving implementation (process learning).

2.1 Objectives of formative research and process learning

1) Increase understanding of household, TBA and parish health center characteristics that influence:
    a. post-partum household priorities, care practices and care-seeking behaviors;
    b. home-based (TBA or skilled provider) and facility-based post-partum services;
    c. Referrals and linkages between home- and facility-based services, including between primary- and referral-level facilities.
2) Understand variations in household practices during implementation (*process learning*)
3) Understand variations in coverage, utilization and quality of home and facility-based services during implementation (*process learning*)
4) Understand variations in referral patterns between different levels of health system during implementation (*process learning*)

Overview of phases of formative research:

The initial phase of data collection for formative research objective 1 will take place from March-July 2010 to guide planning and implementation of the early phases of the intervention. Key sub-phases of this early phase include:

1. Baseline household survey to assess household knowledge and practices (data collection completed; analysis in progress)
2. Focus groups with TBA's and skilled parish health center and district hospital providers (in progress)
3. Baseline survey of individual TBA's and skilled providers to assess attitudes practices and knowledge with regard to targeted interventions (partially completed; ongoing)
4. Simulated case studies to assess baseline competency of TBA's and skilled providers with regard to targeted post-partum and referral interventions (in planning)

Subsequent phases of data collection will be tightly integrated with the ongoing project monitoring system to provide input to implementation structured per phases below:

1. Monthly and quarterly data collection relative to process learning objectives per Detailed Implementation Plan (DIP) monitoring framework and relevant indicators (*in process).*
2. Structured bi-annual review of project indicator results specific to OR process learning objectives (described above) to guide continuous improvement of implementation of the OR intervention.
3. Supplemental data collection: problems identified through the monitoring system such as low coverage, low quality, and failure to complete referrals will serve as the starting point for interviews, observation and case studies to investigate the reasons for the situation and make suggestions for improvement. Methods will include verbal and social autopsies of maternal and newborn deaths, focus groups with providers and users of services, and case studies of referral failures.
4. In-depth analysis of OR process learning objectives during mid-term evaluation.

.

2.11. Research *Question*s by Objective:

Objective 1: Increase understanding of household, TBA and parish health center characteristics that influence:

a. post-partum household care practices and care-seeking behaviors;
b. Home-based (TBA or skilled provider) and facility-based post-partum services;
c. Referrals and linkages between home- and facility-based services, including between primary and referral level facilities.

***Research questions for mothers**: to be collected via household baseline survey and focus groups with mothers:*

1. Greatest challenges of any kind described by mothers during first month after birth (*does not have to be related to health*)?
2. Do mothers think it is a good idea to breastfeed their newborns after birth?
    a. If yes, why?
    b. If no, why?
3. Do mothers think it is a good idea to given only breast milk to newborns after birth (no water or any other liquid)?
    a. If yes, why?
    b. If no, why?
4. Mother's description of what kinds of health services, if any, are most important to her in the first month after birth.
5. Mothers' perceptions of necessity for, availability of, and quality of care provided by closest parish health center during first weeks after birth for:
    a. themselves and
    b. their newborns
6. Mother's perceptions of necessity for, availability of, and quality of care available to be provided by TBA's during the month after birth for:
    a. Themselves
    b. Their newborns
7. What do mothers see as the most serious signs of illness in their newborns (danger signs)?
8. Where/from whom would a mother most prefer to ask for advice or help if she thinks that her newborn is ill?
9. How feasible is it for mothers to contact a TBA if they think they need care for themselves or their newborns?
10. Would mothers like for a nurse or a doctor from the parish health center to visit them at home during the several days after birth?
    a. If yes, why?
    b. If no, why not?
11. Would mothers like for a TBA to visit them in the first few days after a birth?
    a. If yes, why?
    b. If no, why not?
12. If a TBA told a mother that she needed to go to the health center because she was sick would she be able to do so?
    a. If yes, what would help her to do so?
    b. If no, what would be the main reasons that she would not go or the main obstacles that would prevent her from going if she wanted to?
13. If a TBA told a mother that she needed to go to a health center because her newborn was sick would she be able to do so?

a. If yes, what would help her to do so?
b. If no, what would be the main that she would not go, or the main obstacles that would prevent her from going?

14. Other, to be added as appropriate….

Research questions for TBA's: *to be collected via baseline TBA survey (individual questionnaires) and TBA focus groups:*

1. Do TBA's currently provide any post-partum care to women and newborns?
2. Do TBA's provide specific services for newborns in addition to women as part of childbirth or post-partum care? What specifically?
3. What is TBA's opinion of adding post-partum care for mothers and newborns to her current responsibilities? What would be the greatest obstacles for her providing home-based post-partum care? What would be the advantages to her?
4. What kinds of incentives would matter most to the TBA to help her to provide post-partum care (financial, training for new skills, professional advancement, opportunities, mode of transport, other)?
5. What is current status of TBA communication with parish health center? Does she know the name of any providers? Has she visited the center within past 6 months?
6. What is her perception of quality of care at parish health center?
7. Does she refer patients to parish health center? If yes, about how many within past 3 months?
8. Does she feel comfortable referring patients to parish health center?
9. What would help her most to have a better relationship with the parish health center?

Research Questions for Skilled providers based in parish health centers, including members of EBAS teams: *to be collected via baseline survey and skilled provider focus groups:*

1. How long after birth do women usually leave the parish health center?
2. What services are usually provided post-partum to the woman and her newborn after birth before she leaves the health center (e.g. newborn immunizations, newborn physical exam, family planning, etc.)
3. Does the parish health center provide any early post-partum services within first week of birth for women who have delivered at home or who are following up after a birth in the health center?
    a. If yes, how soon after birth are such services usually provided?
    b. What is the content of such services?
4. What if any community or home early post-partum services are currently provided by health care providers based in the parish health center?
5. Does the provider know the names of any TBA's in the villages served by the health center?
    a. If yes, how many TBA's do you know by name?
6. Do providers have any regular communication with TBA's?

    a. If yes, how often?
    b. With approximately how many TBA's do you have regular communication?
    c. What is the usual purpose of such communication?
    d. How does such communication usually occur?
7. Does the health center staff think that health center staff should have regular contact with TBA's?
    a. If yes, why?
    b. If no, why not?
8. What if any early post-partum tasks do you know of that TBA's or any CHW's in the parish health center catchment area provide?
9. Are there post-partum tasks that the health center provider thinks that a trained TBA or CHW could provide for pregnant women and newborns that would help to improve the health of women and their newborns?
10. Does health center staff ever provide training for TBA's?
    a. If yes, what kind of training?
11. Does health center staff ever supervise TBA's?
12. What are the greatest challenges that providers perceive TBA's to face in their catchment area?
13. In the provider's opinion, are CHW's able to recognize and identify complications for which a pregnant woman, recently delivered woman or newborn should be referred to the clinic most of the time?
14. Do TBA's ever refer women to the health center?
    a. If yes, on average how many women are referred per month?
15. What changes might help to improve the way in which TBA's refer home births to the health center?

Research Questions by process learning objectives:

Objective 2: Understand variations in household practices during implementation (*process learning*)

1. What if any change occurs in mothers' stated priorities for post-partum period during program implementation? How do expressed priorities change?
2. What, if any, household maternal newborn practices change during project implementation (e.g. exclusive breastfeeding, thermal protection of newborn, umbilical care, increased nutrition and rest for mother, etc.)? Which practices change the most and why? Which practices change the least and why?'
3. What if any changes occur in household recognition of maternal or newborn danger signs during implementation? Which kinds of danger signs are most easily recognized over time and why? Which are least recognized over time and why?

4. What if any changes occur in household care-seeking for perceived illness in mother or newborn during implementation? What are the main changes that occur and why or why not?
5. What if any changes occur in household adherence with referrals made by TBA's or skilled providers during home visits? What are the reasons for change or the reasons for lack of change from the family's perspective, the TBA's perspective, and the health center staff's perspective?
6. *Other…*

Objective 3: Understand variations in coverage, utilization and quality of home and facility-based services during implementation (*process learning*)

1. What variations occur in TBA home based post-partum services during implementation with regard to:
    a. #'s and household coverage of visits?
    b. Documentation of visits?
    c. Quality of services as measured by direct observation or by simulated case studies/
2. What variations occur in parish health center early post-partum health services during implementation with regard to:
    a. #'s and coverage?
    b. Quality of services as measured by compliance with high impact interventions as measured in medical record or by observation or simulation?
3. What variations occur in EBAS home-based early post-partum services during implementation with regard to:
    a. Timing of visits?
    b. #'s and coverage of visits?
    c. Quality of visits as measured by medical record review, observation or simulation?

Objective 4: Examine patterns of referral between different levels of the health system (household/TBA, parish, and district), understand reasons for lack of referral or failure to comply with referral, and provide on-going recommendations to strengthen the referral system (*process learning).*

1. What variations occur in referral patterns from TBA to parish health center with regard to:
    a. Frequency of any kind of communications between TBA's and health center staff/
    b. Total #/rate of referrals?
    c. Types of referrals (reasons for referrals)?
    d. Timing of referrals?

2. What variations occur in referral patterns between parish health centers and district or provincial hospitals with regard to:
    a. New or improved standardized referral protocols?
    b. Total #/rate of referrals?
    c. Types of referrals?
    d. Timing of referrals/
3. What variations occur in patterns of family compliance with referrals with regard to:
    a. Proportion of referrals adhered to?
    b. Timing of adherence? Does family follow up with referral within one day?
    c. Kinds of referrals with which families most likely to adhere?
    d. Reasons that families identify for adherence or non-adherence?
4. Other…

2.2 Methods for formative research and process learning:

Formative research Objective 1: Qualitative data will be collected through a series of structured focus groups with mothers, civil society members, TBA's and parish health center provider staff. Quantitative data will be collected via structured individual questionnaires administered to mothers, TBA's and skilled providers in parish health centers and district hospitals. Specific methods include:

1. Baseline household KPC survey (completed) addressing objective 1 formative research questions and has completed and is currently being analyzed.
2. Series of focus groups with TBA's and parish health center staff addressing key research questions relative to each group as outlined above (in progress)
3. Individual survey questionnaires administered to TBA's and skilled providers using a standard tool to assess the feasibility of a possible more extensive baseline survey of TBA's and skilled providers (in progress; April-July phase).
4. Simulated case studies to assess knowledge and competence of TBA's and skilled providers re: targeted interventions
5. Several referral case studies (TBA to primary health center and primary health center to hospital)

Process learning Objectives 2-4: Later phases of process learning will be tightly integrated with the project monitoring system as outlined in DIP (in progress). Problems identified through the monitoring system such as low coverage, low quality, and failure to complete referrals will serve as the starting point for interviews, observation and case studies to investigate the reasons for the situation and make suggestions for improvement. Methods will include verbal and social autopsies of maternal and newborn deaths, focus groups with providers and users of services, and case studies of referral failures.

2.3 Analysis Plan Formative research and Process Learning

Because the OR topic was chosen early on in the planning phase of the CHS CHGSP project it has been possible to integrate data needed for both formative and evaluative phases of the OR into the project baseline assessment and monitoring strategy. The evaluative research analysis plan (see below, section 3.6.4) includes a summary table of key OR indicators and the data source for each indicator as part of either the project baseline assessments or as part of ongoing project monitoring.

Formative research to inform and strengthen program design:

Pertinent baseline evaluative research quantitative OR indicators collected via household and TBA surveys and TBA competency evaluations using simulated case studies are summarized in Table I in section 3.6.4 below (e.g. household newborn care practices and TBA post-partum services at baseline). These indicator results are being closely analyzed for the formative phase of the OR to ensure that baseline quantitative results inform implementation planning with regard to identified gaps in household behavior and knowledge of best post-partum practices, TBA competence to deliver high-quality post-partum care, linkages between levels of care, and parish health center post-partum services.

Qualitative data obtained at baseline via focus groups with community members, TBAs and skilled providers/MOH managers are likewise being examined to help guide and strengthen proposed intervention approaches for increasing coverage and quality of TBA home-based early post-partum care, increasing household uptake of best practices, and improving communication between TBAs and parish health center staff for better coordinated management of post-partum routine care and non-routine post-partum complications for mother and newborn (e.g. sepsis.)

Ongoing process Learning:
OR-pertinent project indicators being collected as part of the project's overall monitoring strategy (see DIP Annex 2, M&E Table), will be systematically analyzed twice a year to evaluate progress relative to the four over-arching OR objectives. Any OR indicators that are identified to be lagging at the bi-annual review will be followed up with formative research designed to clarify reasons for lack of progress and to promote process learning. Depending on the area of identified lack of progress, formative research such as referral case studies, verbal autopsies of maternal/newborn deaths and focus groups will be undertaken to improve understanding of barriers to progress and to identify opportunities for strengthening program implementation to achieve desired OR results. The choice of data collection and analysis method for process learning will be driven in real time by the specific OR intervention area that is identified to be lagging during the bi-annual review of OR-relevant project indicators.

The greatest area of challenge for OR process learning is likely to be for OR result # 2, increased household adoption of post-partum best practices, since comprehensive household-level data will only be collected during baseline and end line surveys, unlike

TBA and health center service delivery data that will be part of routine project monitoring. Options will be explored, as funding permits, to allow for mid-project evaluation of progress toward result # 2, including a possible small-scale survey of household knowledge and practice in a sample of high and low-performing parishes to help generate process learning for OR result # 2.

2.4 How results will be used

Results will be used primarily to guide implementation planning and ongoing process learning for both the OR intervention and the larger project intervention. Results will also be leveraged for advocacy with key stakeholders, including community members, TBA's, providers, public health managers, and government including MOH.

Section III: Evaluative Research: objectives, research questions, and hypotheses

3.1. Objectives

1. Assess the coverage and quality achieved from the introduction of an evidence-based package of early post-partum home care for mothers and newborns, including early identification of post-partum maternal newborn complications and prompt referral for skilled facility care for complications.

2. Assess the level of adoption of behaviors resulting from implementation of an intervention to improve household maternal newborn best practices, including routine care practices, post-partum danger sign knowledge, and prompt care-seeking or compliance with referral for identified post-partum danger signs in mothers or newborns.

3. Assess the pattern of referrals and degree of compliance with referral resulting from an intervention to strengthen linkages between TBAs and parish health centers including improved referral processes and follow-through for women and newborns with identified post-partum complications.

4. Assess the coverage and quality achieved from an intervention to improve quality of facility-level parish health center early post-partum care for mothers and newborns, including improved referrals to provincial and county hospitals when complications are identified in mother or newborn.

3.2. Research questions

Objective 1:

1. Is the project able to introduce and achieve improved coverage of home-based early post-partum services for recently delivered women and their newborns in targeted

villages in the Cotopaxi province? *HH questionnaire: % of women who report home-based post-partum care within 2 days of delivery*

2. Is the project able to improve the quality of home-based post-partum services as measured by demonstrated TBA competence for standards-based routine counseling, danger sign/complication recognition, adherence with referral standards (and potentially adherence with home-based neonatal sepsis treatment standards)?

3. Is the project able to achieve TBA competence for basic clinical assessment skills for recognition of complications in recently-delivered women and their newborns?

Objective 2:

4. Is the project able to demonstrate improved self-reported household post-partum maternal newborn best practices, including self-reported routine practices (e.g. exclusive breastfeeding), knowledge of danger signs, appropriate care seeking, and adherence with referral recommendations among parents of children < age 2 ?

Ob jective 3:

5. Is the project able to demonstrate increased incidence of appropriate TBA referrals and family adherence with referral recommendations by TBA's or skilled providers providing home care?

6. Is the project able to demonstrate improved linkages between TBA's and parish health centers as measured by increased communication/contact between TBA's and parish health center staff, increased referrals to parish health center by TBA's, and increased frequency of supportive supervision of TBA's by parish health center staff?

Objective 4:

7. Is the project able to demonstrate improved quality of parish health center early post-partum services (routine and complications care) as measured by compliance with evidence-based standards and measured patient outcomes in participating facilities

Cross-cutting question:

What is the relationship and interaction between different elements of the intervention and within different parishes with regard to coverage and quality of post-partum services, household adoption of best practices and referral patterns? These relationships will be analyzed using process documentation, project monitoring framework and HIS data. Statistical determinations about these relationships would not be possible, but it would be possible to look at tendencies and trends.

3.3 Hypotheses:

1. The proposed intervention will improve at end line relative to baseline the coverage and quality of home-based early post-partum care for mothers and newborns as measured by number of post-partum visits provided by trained TBA's and skilled providers (EBAS) and observed competence of TBA's and skilled providers.

2. The proposed project intervention will lead to improved household maternal newborn best practices as measured by an increase at end line relative to baseline of self-reported household maternal newborn care practices, parental knowledge of danger signs, appropriate care-seeking for danger signs and improved adherence with referrals for complications.

3. The proposed project intervention will strengthen linkages between TBA home- and facility-based post partum services as measured by an increase at end line relative to baseline in self-reported communications/contact between TBA and parish center providers, increased # of referrals by TBA's, and increased family adherence with home-care referrals.

4. The proposed project strategy will improve quality of parish health center post partum services for mothers and newborns as measured by an increase at end line relative to baseline in facility care compliance with post-partum care standards, including hospital referral when indicated.

3.4. Study arms

The intervention study arm will be the project parishes targeted by the Ecuador child survival project. The intervention arm will include all counties and parishes in the Cotopaxi province in which the intervention will be sequentially implemented over the course of the five-year project.

Note: One potential confounder in the proposed OR design will be an inability to distinguish between the effect of the project-wide community BCC intervention and the home-based post-partum care intervention (focus of OR) on key coverage, process and outcome measures. It is beyond the scope of the OR to analyze the community BCC in depth or to stratify intervention types by study arm. However, the analysis plan will need to take into account the potential confounding influence of the BCC intervention in the intervention study arm and the results section will need to mention the potential influence of the BCC intervention.

3.5. Study populations

There will be three study populations evaluated at baseline and endline:

1) Parents from households with a child aged 2 and under
2) TBA's (TBA providers and possible CHW pictorial record at endline)
3) Parish health centers (providers and facility clinical records), including EBAS teams who provide post-partum home-visits

Note: Because the primary intervention is focused on strengthening coverage, quality and linkages of home- and facility-based early post-partum services, TBA and household study populations will be sampled only in catchment areas of sampled parish health centers. *Note: The next version of the concept paper (as we finalized DIP and KPC report) will include specific information on parish health center catchment areas to be included for the OR, including geographic location and # of facilities and CHW's in individual catchment areas. We are in process of finalizing this selection based on catchment areas sampled as part of baseline household assessment.*

3.6 Evaluation Methods:

3.6.1 Sampling:

The parish will be taken as the primary unit of sampling. XX rural parishes in the Cotopaxi province will be sampled (the OR will assess the intervention in rural parishes only.) From the catchment area of each parish health center, a random sample of 19 households will be selected for the household survey for a total of xx households. One challenge will be the lack of population data for individual communities within each parish and the significant variation in number and population density of communities within individual parishes. Household sampling will be calculated using the best population census data possible (probably parish level data) and will be consistently calculated across all intervention and control parishes to mitigate lack of precise community-level population data. A random sample of TBA's among all TBA's known to work in sampled communities in individual parishes will be interviewed in each parish. All parish health centers in the sampled parish health center catchment areas in the Cotopaxi and control province will be sampled.

3.6.2 Information Collection Methods:

Baseline and end line data will be collected via survey individual questionnaires and structured focus groups with three populations in sampled parish health center catchment areas:

1) Households (primarily mothers)
2) TBA's
3) Parish ambulatory health center skilled providers

In addition to individual questionnaires to assess knowledge, practice and attitudes, quality of post-partum care will be assessed via simulated case studies of early post-partum consultations (home and facility-base) that evaluates competency of TBA's and skilled providers with regard to targeted post-partum and referral interventions. TBA competence for achieving post-partum care standards will be assessed via quarterly simulated case studies of home-based early post-partum care that assesses TBA

counseling, physical assessment, and complication/danger sign (mother and newborn) recognition skills. Quality of care at the facility level will be assessed via quarterly medical chart review in participating facilities in each county. Medical records will be randomly reviewed for adherence of care with specific post-partum care standards, using a standardized checklist. Average compliance per reviewed chart with designated standards will be aggregated across facilities at parish, county and province level. Outcome data relevant to quality of facility-level post-partum care will be monitored via monthly project facility indicators: post-partum hemorrhage and newborn mortality prior to discharge.

In addition to baseline and end line data collection via survey, focus group and simulated case studies, there will be ongoing collection and monitoring of data related to key evaluation research questions as an integral piece of the project's monitoring framework. Key OR indicators related to coverage, quality, care-seeking and referral practices will be regularly collected and analyzed as a routine project monitoring activity that will in turn inform regular process learning. The DIP monitoring framework will explicitly highlight indicators, data collection sources and methods relative to both project and OR indicators, since the intervention to be evaluated by the OR is one key project intervention. Process documentation measures relative to different pieces of the intervention will be analyzed as a whole to increase understanding of the interaction between different project elements.

The household questionnaire will measure the main coverage, process and outcome indicators for household. The TBA questionnaire will measure coverage and process indicators including number of early post-partum home visits in last month(s), number of referrals of women and newborns with post-partum complications in last month(s), and communication with parish health center workers in last month(s). The parish ambulatory health center questionnaire will measure quality of care, referral and outcome indicators of facility post-partum maternal newborn services as well as intermediate variables related to linkages with TBA's and county/provincial hospitals such as level of communication and contact with TBA's and hospital providers. In addition to information collected via baseline and end line surveys with mothers (household), TBA's and skilled providers, ongoing process documentation will highlight changing results for coverage, utilization, quality and referral indicators as well as qualitative data elicited via formative research process measure data collection using case studies, verbal autopsies and other innovative qualitative data collection methods as appropriate (see process learning analysis plan in section 2.3 above.)

3.6.3 Timing and Frequency of information collection:

Evaluation research question data will be collected at baseline and end line of the project intervention as described above. In addition, coverage, quality and process indicators (e.g. number of post-partum home visits by TBA's; number of referrals) will be measured on a regular basis an integral part of the project's monitoring framework to guide continuous improvement of the intervention and also for advocacy purposes with key

MOH, community and partner stakeholders and decision makers. Annex 2 of the DIP summarizes frequency of data collection for key OR indicators.

3.6.4 Analysis Plan Evaluative research

As mentioned earlier, because the OR topic was chosen early on in the planning phase of the project it has been possible to integrate data needed for both formative and evaluative phases of the OR into the overall project baseline assessments and monitoring strategy so that OR-specific data is included in general project data collection as described in methods section above. Data for analysis of the evaluative research will be primarily quantitative, taken from baseline TBA and household surveys and project monitoring indicators (see DIP, Annex 2, M&E table.)

Depending on the research question and population of interest, the units of analysis for the evaluative research will be the Individual County, parish, facilities, and TBAs. Data will be aggregated at TBA, facility, parish and county level; individuals will not be identified. Facility-level data will be aggregated also by specific facility type: parish ambulatory health center, private centers, county hospitals, and others as appropriate. Quantitative analyses will include the reporting of percentages, percent distribution, means and medians as appropriate.

Table I summarizes the specific evaluative OR indicators and data source that will be used to analyze the results for each evaluative research question categorized by research objectives:

Table 1: Indicators summarized by Evaluation Research Question:

Research Question	**Indicator**	
	Description	Source
Objective 1: Assess the coverage and quality achieved from the introduction of an evidence-based package of early post-partum home care for mothers and newborns, including early identification of post-partum maternal newborn complications and prompt referral for skilled facility care for complications.		
(1) Is the project able to introduce and achieve improved coverage of home-based early post-partum services for recently delivered women and their newborns in targeted villages in Cotopaxi?	% of mothers with children 0-23 mos. who report home post-partum visit within 2 days of birth after a facility or home birth.	HH questionnaire (baseline and end line)
	% of TBAs who report providing post-partum visit within first 2 days of birth (for home or facility birth)	TBA survey (baseline and end line)
	# of early post-partum visits (1st 3 days) made by project parish TBAs in last quarter	TBA record and TBA supervision reports (quarterly)

(2) Is the project able to improve the quality of home-based post-partum services as measured by demonstrated TBA knowledge and competence for standards-based routine counseling, danger sign/complication recognition, and adherence with referral standards?	% of TBAs able to cite at least 2 post-partum danger signs for mother	TBA survey (baseline and end line)
	% of TBAs able to cite at least 2 post-partum danger signs for newborn	
	% of TBAs able to cite at least 2 newborn care best practices	
	% of TBAs in each parish with more than 75% adherence with a set of evidence-based post-partum counseling standards for mothers and newborns	Direct observation or simulated TBA post-partum counseling (bi-annual)
Is the project able to achieve TBA competence for basic clinical care assessment skills (for recognition of complications in recently delivered women and their newborns)?	% average TBA compliance with post-partum newborn examination standards for identification of danger signs by observation or simulation of real-newborn physical exam	Simulated TBA clinical assessment of newborn (quarterly)
Objective 2: Assess the level of adoption of behaviors resulting from implementation of an intervention to improve household maternal newborn best practices, including routine care practices, post-partum danger sign knowledge, and compliance with referral for identified danger signs in mothers or newborns.		
Is the project able to demonstrate improved self-reported household post-partum maternal newborn best practices, including self-reported routine practices, knowledge of danger signs, and adherence with referral recommendations among parents of children < 2?	% of mothers of children age 0-23 mos. who report BF w/in first hour after birth	HH survey questionnaire (baseline and end line)
	% of mothers of children 0-23 mos. who can name two newborn danger signs.	
	% of mothers of children 0-23 mos. who can name two post-partum maternal danger signs	
	% of mothers of children 0-23 mos. who followed through on referral by TBA for post-partum complication for newborn	Project Indicator: TBA records (quarterly)
Objective 3: Assess the pattern of referrals and degree of compliance with referral resulting from an intervention to strengthen linkages between TBAs and parish health centers including improved referral processes and follow-through for women and newborns with identified post-partum complications.		
(1) Is the project able to demonstrate increased incidence of TBA referrals and family adherence with referral recommendations by TBA's or skilled providers providing home post-partum care?	# of newborns referred to health center or county hospital by TBA within past quarter	TBA record and/or TBA supervision record (quarterly)
	# of women post-partum referred to health center of county hospital by TBA within past quarter	
	# of households that report adherence with TBA referral	HH questionnaire survey (baseline and end line)
(2) Is the project able to demonstrate improved	% of TBAs who report to know how to contact a skilled provider at nearest heath center	TBA survey

linkages between TBAs and parish health centers as measured by increased communication/contact between TBAs and parish health center staff, increased referrals to parish health centers by TBA's and increased frequency of supportive supervision of TBA's by parish health center staff?	% of TBAs who report to have visited health center in last 3 months.	(annual if possible)
	% of TBAs who report a supervision visit by a parish health center skilled provider in last 3 months.	
	% of women treated for a maternal (intapartum or postpartum) complication in parish health centers and county hospital referred by TBA.	Parish health center records (quarterly)
	% of newborns treated for a complication in parish health center referred by TBA	
Objective 4: Assess the coverage and quality achieved from an intervention to improve quality of facility-level parish health center early post-partum care for mothers and newborns, including improved referrals to provincial and county hospitals when complications are identified in mother or newborn.		
(1) Is the project able to demonstrate improved quality of parish health center early post-partum services as measured by compliance with evidence-based standards and measured patient outcomes in participating facilities?	% of births benefitting from AMTSL in participating facilities	Project facility indicator (quarterly) *Review of random sample of charts per facility aggregated across facilities*
	% of births demonstrating compliance with Essential Newborn Care standards in participating facilities	
	Post-partum hemorrhage rate	
	Newborn mortality rate prior to discharge from facility	

References:

Ahluwalia I.B, Schmid T., Kouletio M., Kanenda O. An evaluation of a community-based approach to safe motherhood in northwestern Tanzania. *International J of Gynecology and Obstetrics* 82 (2003) 231-240.

Awasthi S, Verma T, Agarwal M. Danger signs of neonatal illnesses: Perceptions of caregivers and health workers in northern India. *Bull World Health Organ* 2006; **84:** 819–26.

Bang AT, Reddy HM, Deshmukh MD, Baitule SB, Bang RA. Neonatal and infant mortality in the ten years (1993 to 2003) of the Gadchiroli field trial: effect of home-based neonatal care. *J Perinatol* 2005; **25** (suppl 1)**:** S92–107.

Bang AT, Bang RA, Baitule SB, Reddy MH, Deshmukh MD. Effect of home-based neonatal care and management of sepsis on Neonatal mortality: field trial in rural India. *Lancet* 1999; **354:** 1955–61.

Bang AT, Bang RA, Reddy MH, et al. Simple clinical criteria to identify sepsis or pneumonia in neonates in the community needing treatment or referral. *Pediatr Infect Dis J* 2005; **24:** 335–41.

Baqui, et al. Effect of a Community-based newborn care intervention package implemented through two service delivery strategies in Syhlet District, Bangladesh: a cluster-randomized control trial. *Lancet*, 2009.

Berry N.S. Kaqchikel midwives, home births, and emergency obstetric referrals in Guatemala: Contextualizing the choice to stay at home. *Social Science & Medicine* 62 (2006) 1958-1969.

Bryce J, Boschi-Pinto C, Shibuya K, Black RE. WHO estimates of the causes of death in children. *Lancet* 2005; **365:** 1147–52.

Bhutta ZA, Memon ZA, Soffi S, Salat MS, Cousens S, Martines J. Implementing community-based perinatal care: results from a pilot study in rural Pakistan. Bull World Health Organ 2008;86:452-459

Bhutta ZA, Darmstadt GL, Hasan BS, Haws RA. Community-based interventions for improving perinatal and neonatal health outcomes in developing countries: a review of the evidence. *Pediatrics* 2005; **115** (suppl 2)**:** 519–617.

Carlo WA, Jehan I, Chomba E, Tshefu A, Garces A, Sailajan, Paridaandan,Alkthabe F, McClure EM, Derman RJ, Goldenberg RL, Bose C, Krebs NF, Panigrahi P,Buekens P,

Chakraborty H, Hartwell TD, Wright LL, Newborn-Care Training and Perinatal Mortality in Developing Countries, N Engl J Med 362:614, February 18, 2010

Daga SR, Daga AS, Dighole RV, Patil RP. Anganwadi worker's participation in rural newborn care. *Indian J Pediatr* 1993; **60:** 627–30.

Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, de Bernis L. Evidence-based, cost-effective interventions: how many newborn babies can we save? Lancet 2005;365:977-988.

Darmstadt GL, Hossain MM, Jana AK, et al. Determination of extended-interval gentamicin dosing for neonatal patients in developing countries. *Pediatr Infect Dis J* 2007; **26:** 501–07.

Haines A, Sanders D, Lehmann U, Achieving child survival goals: potential contribution of community health workers. *Lancet* 2007; **369:** 2121–31.

Haws RA, Thomas AL, Bhutta ZA, Darmstadt GL. Impact of packaged interventions on neonatal health: a review of the evidence.*Health Policy Plan* 2007; **22:** 193–215.

Hill Z, Kirkwood B, Edmond K. Family and community practices that promote child survival, growth and development: a review of the evidence. Geneva: World Health Organisation; 2001.

Jokhio AH, Winter HR, Cheng KK. An intervention involving traditional birth attendants and perinatal and maternal mortality in Pakistan. *N Engl J Med* 2005; **352** (20)**:** 2091–99.

Kalter HD, Salgado R, Moulton LH, Nieto P, Contreras A, Egas ML, Black RE. Factors constraining adherence to referral advice for severely ill children managed by the Integrated Management of Childhood Illness approach in Imbabura Province, Ecuador. *Acta Paediatr* 92: 103-110. 2003.

Lawn JE, Cousens S, Zupan J. 4 million neonatal deaths: when? where? why? *Lancet* 2005; **365:** 891–900.

Manandhar DS, Osrin D, Shrestha BP, et al. Eff ect of a participatory intervention with women's groups on birth outcomes in Nepal: cluster-randomised controlled trial. *Lancet* 2004; **364:** 970–79.

Mohan P, Iyengar S, Brahmawar S, Sen K. Auxialiary Nurse Midwife: What determines her place of residence? *Journal of Health & Population in Developing Countries,* Department of Health Policy and Administration, School of Public Health, University of North Carolina at Chapel Hill, June 2003.

Murray S.F, Pearson S.C. Maternity referral systems in developing countries: Current knowledge and future research needs. *Social Science and Medicine* 62 (2006) 2205-2215.

Parkhurst, O.J., Rahman, S.A. Non-professional health practioners and referrals to facilities: lessons from maternal care in Bangladesh. *Health Policy and Planning* 2007:**22**:149-155.

Perreira, K., Bailey, P., de Bocaletti., Hurtado E., Recinos de Villagran, S., Matute, J. *Maternal Child Health J, Vol. 6, No. 1, March 2002.*

Pratinidhi A, Shah U, Shrotri A, Bodhani N. Risk-approach strategy in neonatal care. *Bull World Health Organ* 1986; **64:** 291–7.

Senarath U, Fernando DN, Rodrigo I. Newborn care practices at home: effect of a hospital-based intervention in Sri Lanka. *J Trop Pediatr* 2007;53:113-118.

Senarath U, Fernando DN, Rodrigo I. Effect of training care providers on practice of essential newborn care in hospitals in Sri Lanka. *J Obstet Gynecol Neonatal Nursing* 2007;36:531-541

Sibley L, Caleb-Varkey L, Upadhyay J, Prasad R, Saroha E, Bhatla N, Paul V. Recognition of and Response to Postpartum Hemorrhage in Rural Northern India. *Journal of Midwifery & Women's Health.* Vol. 50, No.4, 2005.

Young Infants Clinical Signs Study Group. Clinical signs that predict severe illness in children under age 2 months: a multicentre study. *Lancet* 2008; **371:** 135–42.

Winch PJ, Alam MA, Akther A, et al. Local understandings of vulnerability and protection during the neonatal period in Sylhet District, Bangladesh: a qualitative study. *Lancet* 2005; **366**: 478–85.

de Zoysa I, Bhandari N, Akhtari N, Bhan MK. Careseeking for illness in young infants in an urban slum in India. *Soc Sci Med* 1998; **47:** 2101–11.

REPORT ON THE BASELINE KNOWLEDGE, PRACTICE AND COVERAGE SURVEY

May 2010

CHILD SURVIVAL PROJECT

in

Cotopaxi province, Ecuador

CHS *in partnership with* MOH-Ecuador

Jorge Hermida, MD, CHS-Ecuador

Mario Chávez, MD, CHS-Ecuador

Daniel González, Anthropologist, CHS-Ecuador

Genny Fuentes, Social Worker, CHS-Ecuador

Acknowledgements

The authors of this report would like to thank the following people for their time and effort in the KPC process.

Kathleen Hill, CHS/Washington DC
Andrew Gall, CHS/Washington DC
Jennifer Luna, MCHIP, Washington DC
Peter Winch, JHSPH/Baltimore

KPC Trainers	Supervisors
Rommel Andrade	*José Cabrera*
Mario Chavez	*Christian Egas*
Genny Fuentes	*Edgar Lima*
Daniel González	*Silvana Quinatoa*
Deifilia Landeta	
José Ordoñez	

Interviewers	Other Key Participants
Maria Celinda Ante	*Carlos Donoso*
Liliana Natali Castillo	*Susana Moscoso*
Marina Elizabeth Cruz	*Julia Venegas*
Gabriela Mercedes Cruz	*Francisco Choloquinga*
Marianela Del Pilar Guaman	*Segundo Piltasig*
Martha Latacunga Pastuña	*Eduardo Arguello*
Rosa Francisca Morales	
Miriam Patricia Pillajo	
Elvia Mercedes Sailema	
Maria Victoria Toaquiza	
Nicolas UmajingaUmajinga	
Maria Juliana Vega	

Table of Contents

I. EXECUTIVE SUMMARY

Objectives:

The overall goal of the project KPC survey was to establish a baseline for the principle project indicators to guide effective project planning, implementation, and continous improvement

Specific Objectives included;

- Obtain qualitative and quantitative data relevant to the project objectives in order to more effectively guide the priorities and strategies of the DIP.
- Measure baseline Rapid Catch USAID indicators (as required by USAID)
- Obtain qualitative and quantitative baseline data for Ecuador CHGSP Operations Research focused on early post-partum home care intervention to establish baseline and guide implementation and measurement of OR intervention (see OR Concept paper)

Methods:

Prior to initiation of the household survey, a series of meetings were held with Cotopaxi provincial MOH officials to ensure MOH agreement and input into household survey objectives, design and implementation. In addition, because the baseline survey included OR baseline data, an application for IRB approval was developed and submitted to the CHS IRB advisory board. IRB approval was obtained prior to initiation of collection of baseline data (see DIP annex 13; IRB approval letter).

A household survey questionnaire tool was developed to measure three sets of indicators (many overlapping) in line with the survey objectives: 1. Project-wide indicators; 2. Project Operations research indicators; 3.USAID Rapid CATCH Indicators (all except malaria and anthropometric data, excluded with USAID permission.)

The survey target population was mothers with a live child under 24 months of age living in rural parishes in the Cotopaxi province. As described in the methods section, a sample of rural parishes from almost all Cotopaxi counties was identified; urban parishes of the capital city, Latacunga, were not included in the sample. The total sample size was 462 houselholds randomly selected from a census-based sample of 30 parishes from 7 counties of the Cotopaxi province.

A local consultant research group provided technical assistance to the CHS country team with all aspects of the data preparation, collection and analysis, including: finalizing and pre-testing questionnaire tool; training and supervision of data collectors; data tabulation; data cleaning and data analysis.

Key Findings:

Survey results are detailed in the results section (section V) and in Annex F. A brief summary

of key findings and implication for the project is provided below. Preliminary qualitative findings related to TBA practice and knowledge are described in section F. Given the limits of the household survey for assessing systems level indicators relevant to intervention/results #1, 3, and 4, (e.g. referrals, linkages between levels of care, and quality of TBA and facility care), additional assessments are underway as outlined in project DIP.

Intervention/Result 1: Increased availability/access to and utilization of a coordinated continuum of high-impact MNC services:

In general, coverage of evidence-based antenatal, skilled delivery and early post-partum services was significantly lower among indigenous Indian respondents than among non-Indian respondents (Mestizo, etc.). For example, 49% of Indian mothers reporting receiving 4 or more antenatal sessions with their last pregnancy as contrasted with 77% of Mestizo mothers; 36% of Indian mothers reported a facility birth while 89% of Mestizo women reported a facility birth, with an average skilled birth rate of 76% across the entire sample population. Home-based early post-partum care was low across the entire population of respondents, with only 10% of women reporting a home-based early post-partum visit within first 48 hours. The household survey was not able to assess quality and timing of *facility-based* early post-partum care which is being assessed via a facility-based survey.

Intervention/Results 2 and 3: Improved knowledge/demand for evidence-based MNC services and improved household health practices (Result 2); Improved quality of MNC services (Result 3):

In general survey results demonstrate low frequency of reported high-impact maternal newborn household practices and reported counseling and by inference low quality of maternal newborn counseling services. For example, only 57% women recalled any birth preparedness counseling and only 54% reported at least 2 birth preparedness actions during their last pregnancy. Only 63% of mothers were able to cite at least two pregnancy danger signs; 50% of mothers were able to cite two delivery danger signs; and 60% of mothers were able to name at least two danger signs for a mother or for a newborn in the post-partum period. 45% of respondents reported non-exclusive breastfeeding prior to 6 months of age.

Only 25% of all mothers stated that postpartum care for mother and newborn should occur in the first 48 hours after birth, with 44% of respondents stating that post-partum care should occur three weeks or more after birth. Only 48% of mothers reported using a modern contraceptive method although 80% cited two-years as a desirable time to space pregnancies.

Implications:

The measured gap in coverage of home-based early post-partum care under result/intervention # 1 is one of the important findings of the baseline survey and is the topic of the project's Operations Research. Survey results demonstrate that during the early post-partum period, when the majority of newborn life-threatening conditions and deaths are known to occur, the majority of mothers and newborns surveyed reported no coverage of early post-partum health care. Given traditional practices of a 40-day post-partum confinement to the home, the programmatic implications will be for a strong project focus on the promotion of home-based post-partum care for mother and newborn in the first 48 hours provided by a trained TBA or skilled provider (EBAS team). Facilility-level interventions will promote improved routine post-partum care and counseling with strong emphasis on building primary health center

capacity for effective supervision of TBAs for provision of effective home-based early post-partum care.

Measured results under results/interventions #2 and #3 point to important gaps in mother's knowledge and practice of high impact behaviors such as danger sign recognition, exclusive breastfeeding and knowledge of importance of early post-partum care and also suggest low quality of antenatal and post-partum care counseling by TBAs and skilled providers. The program implication will be to prioritize counseling and BCC interventions at community and facility service delivery level, including a strong focus on strengthening TBA capacity to provide effective evidence-based counseling as a routine part of antenatal, intra-partum and post-partum services. Given the low rate of modern contraceptive use and the historic absence of family planning counseling and services as part of post-partum care in Ecuador, emphasis will be placed on integrating family planning counseling and services into routine post-partum services at both facility and home levels.

II. BACKGROUND

A. Project location and background on the area

Cotopaxi province is composed of 7 cantons: Latacunga, La Maná, Pangua, Pujilí, Salcedo, Saquisilí, Sigchos, which include 11 urban parishes and 38 rural parishes. *See map of Cotopaxi in **Annex A.***

Cotopaxi has a population of 416,167 inhabitants[1], 67% of whom live in rural areas[2]. Situated in one of the poorest provinces of the country, Cotopaxi poverty level reaches 90.47% based on the Unsatisfied Basic Needs (UBN) index[3]. Of the provinces inhabitants, 28% belong to the indigenous population[4]. The principal indigenous people is the Panzaleo, of the Kichwa nationality, those members are organized into approximately 850 rural communities.

The primary economic activities of the poor of Cotopaxi are centered around farming, both for the consumption in local markets, as well as at the provincial, national, and international level, as is the case with the cultivation of flowers or banana in the province's tropical areas[5].

B. Characteristics of the target population

The target population of this project includes pregnant, intrapartum, and postpartum women, as well as newborns. According to the INEC, there were 5996 live births in 2008 in Cotopaxi[6], whereas the population projections for children under-five is 45,867[7], and the number of women of reproductive age (15-49 years) is 97,934[8].

The maternal mortality ratio is 102.2/100,000 live births[9] and the infant mortality rate is 21.8/1000 live births[10]. Both are among the highest in Ecuador, and without question are higher than the national maternal mortality ratio: 73/100,000 live births and infant mortality rate: 20.1/1000 live births. Neonatal mortality in Cotopaxi is also high at 7.8/1000 live births[11], which is the third-highest rate of the Sierra provinces. This situation reveals the inequality that exists among the populations and provinces of Ecuador, as well as the need to focus efforts on marginal populations, as in Cotopaxi.

---

[1] MOH. Joint Information System. Population projections for operational areas and units by assigned groups. 2009.
[2] **INEC**, Population and Household Census (2001)
[3] Sistema Integrado de Indicadores Sociales del Ecuador (Integrated System of Social Indicators of Ecuador, **SIISE**), 2007.
[4] Consejo de Desarrollo de las Nacionalidades y Pueblos del Ecuador (Nationalities and Peoples Development Council of Ecuador or **CODENPE**), Canton and Parish Population Projects, by program group, Cotopaxi-Ecuador, 2008.
[5] Honorable Consejo Provincial de Cotopaxi (Honorable Provincial Council of Cotopaxi). Plan Participativo de Desarrollo de Cotopaxi (Participatory Development Plan of Cotopaxi, or PPDC). Latacunga 2004
[6] **INEC**, 2008. Vital Statistics Yearbook: Births and deaths.
[7] **MOH. Joint Information System.** Population projections for operational areas and units by assigned groups. Quito- Ecuador 2009.
[8] SIISE – INEC, 2004.
[9] **INEC**, 2008. Vital Statistics Yearbook: Births and deaths.
[10] Idem.
[11] **INEC**, Vital Statistics, 2008.

Table 1: Population of Women and Children in the Project's Target Area		
Beneficiaries	Population	Percentage
Infants: 0-11 months	8,870	2.1%
Children: 12-59 months	37,095	8.9%
Children: 0-59 months	45,965	11%
Woman: 15-49 years	97,934	23.5%
Total population	416,167	----

Source: MOH Joint Information System Population Projections

C. Social, economic and health conditions within the project area

Cotopaxi has the highest percentage of malnourished children under five years of age in Ecuador, with 33.8% exhibiting chronic malnutrition[12]. Chronic malnutrition is higher among the offspring of indigenous mothers (46.7%)[13]. The principal direct causes of under-five mortality and morbidity include respiratory infections (25.8%) and diarrheal diseases, both frequently associated with malnutrition. Neonatal mortality in Cotopaxi – 7.8 per 1000 live births – accounts for a significant share of the province's under-five mortality. The primary causes of neonatal mortality include asphyxiation and infections, often linked with low birth weight and prematurity.

Data from the 2008 INEC Vital Statistics Yearbook points to post-partum hemorrhage as the primary cause of maternal mortality at the national level (15.2%), followed by gestational hypertension caused by significant proteinuria in pregnancy (13.9%), eclampsia (13.3%), other maternal diseases (10.3%), abnormality of forces of labor (5.5%), and puerperal sepsis (4.8%). Cotopaxi has one of the highest maternal mortality rates due to obstetric hemorrhage.

As seen in the following table, the MOH and the Ecuadorian Institute for Social Security (Instituto Ecuatoriano de Seguridad Social, IESS) are the largest providers of health services in the province through their Rural Social Security program (Seguro Social Campesino, SSC). The number of health facilities in Cotopaxi is shown in the following table according to institutional affiliation:

Table 2: Health Facilities in the Project's Target Area							
FACILITY	**MOH**	**IESS**		Air Force	MUNICIPAL	**PRIVATE**	**TOTAL**
		IESS	**SSC**				
General Hospital	1	1					2
Basic Hospital	5						5
Health Centers and Subcenters	45			1			46
Health Units (Puestos de Salud)	5						5
Clinics		5	38	2	1	12	58
TOTAL	**56**	**6**	**38**	**3**	**1**	**12**	**116**

[12] Encuesta Demográfica y de Salud Materna e Infantil (Maternal and Child Health Survey, **ENDEMAIN**), 2004, pp. 246, 258.

[13] **ENDEMAIN**, 2004, p. 247.

Source: Yearbook of Health Resources and Activities: INEC, 2006.

Despite the availability of health services in Cotopaxi, 77% of the population lacks public or private health coverage[14]. In 2008, the MOH initiated a new approach to healthcare called "Basic Health Teams" (Equipos Básicos de Salud, EBAS) within the framework of the New Healthcare Model to be implemented. The EBAS teams are composed of a general physician, nurse, and nurse auxiliary and operate out of a health center ("Centro de Salud") since their primary responsibility is to extend health coverage through home visits. The program is financed with core funding from the national government.

According to the 2004 ENDEMAIN National Maternal and Child Health Survey, 46.5% of women who gave birth in Cotopaxi in 2004 underwent home births[15]. Among indigenous women, 71.43% gave birth at home attended by a Traditional Birth Attendant (TBA) or midwife, resulting in a significantly higher percentage of home births in indigenous communities[16]. The primary reasons given for why women prefer to give birth at home include "custom" or tradition (56.5%) along with greater intimacy and confidence in family and the midwife (47.1%)[17]. In Cotopaxi, there are midwives in every rural community[18].

The most serious obstacles to the reduction of maternal and neonatal mortality in Ecuador at the community level include low demand for and limited access to effective, qualified, evidence-based care, along with flaws in the quality and availability of the care provided in health facilities. Practically all the health institutions offer obstetric and infant care in the province with little coordination among them – MOH, IESS, the air force, non-governmental organizations, and private providers – resulting in duplicated efforts, lost resources, and significant variations in the quality of care. In provinces like Cotopaxi, with a population that is primarily rural and indigenous, the outcomes of such obstacles are stagnant maternal mortality rates – this in spite of the fact that Ecuador itself has achieved some success with respect to this indicator – and a neonatal mortality rate that has remained essentially unchanged despite the fact that post-neonatal mortality has fallen significantly in the country.

D. National standards/policies regarding maternal and child health

Since 1994, Ecuador has developed various national policies and strategies to improve maternal and child care. First and foremost, the "Law on the Provision of Free Maternity Services and Child Care" has reduced maternal mortality by increasing the access of women and children to quality care, strengthening citizen involvement in decision-making, and promoting accountability among the public sector. In addition, the "Sexual and Reproductive Health Action Plan", formulated in 2006, as well as the "National Plan for Accelerated Reduction of Maternal and Neonatal Mortality", proposed in 2008, are two important strategies at the national level. Furthermore, some of the principal objectives of the 2007-2010

[14] **INEC**, 2006, Standard of Living Survey.

[15] **ENDEMAIN**, 2004, p. 175.

[16] Integrated System of Social Indicators of Ecuador (**SIISE**); Nationalities and Peoples Development Council of Ecuador (**CODENPE**); First National Survey of the Nationalities and Peoples of Ecuador (**ECONAP**), 2002.

[17] **ENDEMAIN**, 2004, pp. 224, 226.

[18] Integrated System of Social Indicators of Ecuador (**SIISE**); Nationalities and Peoples Development Council of Ecuador (**CODENPE**); First National Survey of the Nationalities and Peoples of Ecuador (**ECONAP**), 2002.

National Development Plan are to reduce infant mortality (by 25%), neonatal mortality (by 35%), maternal mortality (by 30%), and teenage pregnancy (by 25%); to improve health services for women; to contain the advance of HIV/AIDS; and to improve the quality and hospitality of health services. In spite of the importance of these public policies, improvements in providing services in health facilities have been slow to materialize. There is a gap between the objectives proposed in national policies and the functional changes needed in the organization of institutions that provide care to attain the proposed targets.

Starting in 2008, the Ministry of Public Health in Ecuador has had a new regulatory package available on maternal and child care for use in every health facility. Furthermore, a quality of care improvement process is now in an expansion phase, for which it is relying on standards based on scientific evidence.

Moreover, the MOH has initiated the process of defining the role of traditional birth attendants (TBA) in the national health system, which has resulted in a proposal developed collaboratively among various stakeholders at the national level, including TBAs, health personnel, and the leaders of many of the country's indigenous and afro-descendant organizations. This proposal will help to address outstanding critical issues, which until now have been passed over, such as the role of traditional health agents in the Law on Free Maternity, and their part in maternal and child health care both in their communities and in certain MOH health facilities.

E. Overview of the Child Survival project: goals, objectives, intervention activities

CHS began its work in Ecuador in 1995; since then it has worked in support of the Ministry of Health to improve the quality of healthcare at the national level, particularly in the area of maternal health, through the Quality Assurance Project (QAP) and the Health Care Improvement project (HCI), both funded by USAID.

Over the decade of 2000-2009, CHS-Ecuador started the Latin American Initiative for the Reduction of Maternal Mortality (LAMM). Starting in 2006, it worked on activities to overcome cultural barriers to utilization of skilled birth attendants with an emaphasis on interventions to adapt health services to be more culturally responsive

Over the course of these years, CHS-Ecuador developed a profound understanding of the country's health problems, particularly in the area of maternal and neonatal health. Through the HCI project, CHS-Ecuador is presently providing support to the MOH in its expansion of the Maternal and Neonatal Care Improvement Model to include a large proportion of the country's operational units.

The Cotopaxi Child Survival Project will be based on the work performed by the QAP and HCI projects to provide support for the MOH in solving issues related to maternal and neonatal mortality in Cotopaxi.

The project's partner is the MOH through its Provincial Health Directorate of Cotopaxi. The MOH is the principal provider of the country's health services, particularly for the poorest segments of the population, which typically have little access to the health services provided by social security or the private sector. Over many years, CHS-Ecuador has maintained a positive and fruitful collaborative with the Ministry of Health.

The primary project goal is to contribute to the reduction of maternal and neonatal mortality and morbidity in the province of Cotopaxi.

To attain this goal, the overarching strategic objective of the project is to improve household health promotion practices and household access to and utilization of a continuum of high-impact maternal and neonatal care services, at both the household and institutional level, provided as part of a coordinated network of CHW's, health facilities and social organizations.

The project proposes an outcomes framework composed of 4 key interventions and their respective strategies:

1. **Better availability/access to a continuum of high-impact maternal and neonatal care, at both household and facility level.**

    1.1. To strengthen high-impact community maternal and neonatal care integrating traditional birth attendants, health centers, and EBAS.
    1.2. To strengthen/develop communication and referral mechanisms among the different levels of care (community, primary, secondary).
    1.3. To improve relations between health personnel and CHWs/TBAs.
    1.4. To actively involve community organizations.

2. **Better understanding/demand for evidence-based community and facility MNC services, including improved household health promotion practices.**

    2.1. To develop communication activities for behavior change.
    2.2. To strengthen counseling activities both at facilities and at home, by skilled providers and trained CHW's/TBA's.
    2.3. To improve the cultural competency of the institutional health services.
    2.4. To publicize the citizen's right to quality healthcare.
    2.5. To develop mechanisms to exercise these rights.

3. **Improved quality of MNC services provided as part of a coordinated network of CHWs and facilities.**

    3.1. To train traditional birth attendants in basic EONC.
    3.2. To formulate/implement mechanisms for oversight and continuous quality improvement for traditional birth attendants.
    3.3. Strengthen EONC knowledge/skills of health workers..
    3.4. To formulate/implement mechanisms for oversight and quality improvement (QI) for facilities.
    3.5. To organize an EONC network for the different levels of care.
    3.6. To develop/implement community/participant involvement in QI follow-up.

4. **Improved policy environment for coordination among community health workers, health care institutions, and community/social organizations. .**

    4.1. To promote a provincial EONC network of community and facility-based services.
    4.2. To develop a sub-system for surveillance and analysis of maternal/neonatal health.
    4.3. To strengthen canton health committees and the LMGYAI (Law on Free Maternity

and Infant Care).

4.4. Establish a legal framework favorable to the health network.

F. Results of qualitative studies

HACAP Operational Research

In 2005, the CHS-Ecuador team in collaboration with Family Care International (FCI-Ecuador), supported the MOH to conduct a pilot study on Cultural Humanization and Adaptation of Intrapartum Care (Humanización y Adecuación Cultural de la Atención del Parto, or HACAP), whose objective was to develop a working methodology among health personnel, birth attendants, and patients, in order to achieve consensus changes for the cultural adaptation of obstetric care. This study was carried out initially in three hospitals in the province of Tungurahua.

Afterwards, in 2007 and 2008, the MOH, with the support of the QAP, conducted operational research in four provinces (Bolívar, Cotopaxi, Chimborazo and Cañar) to understand the impact that the cultural adaptations would have on patient satisfaction and on the use of obstetric services.

Via this participative approach (HACAP), they successfully implemented concrete changes to adapt the care to cultural norms:

- Multiple improvements were made in healthcare in the four hospitals via the changes designed according to the cultural gaps identified: position of delivery, temperature of wards, food, companionship, and information, among others.
- The research showed significant improvements in patient satisfaction due to the specific changes in the elaborate cultural gaps.
- An average gain of 65.8% was attained in the use of skilled delivery services of the 4 hospitals, although said increase is not uniform among the 4 provinces.

The difficulties identified were:

- Resistance of health personnel to certain changes in healthcare from a lack of understanding of and respect for traditional medicine.
- The lack of patient-provider interpersonal relationships, a gap that requires long-term changes in the attitudes and world view of the health providers. The improvements in interpersonal treatments require institutional strategies; for example, continuous training of health personnel in support of the efforts made by the hospital to adapt their care.
- Lack of organized patient involvement (patient committees).
- Lack of resources to conduct certain adaptations; frequent changes in personnel (turnover); excessive workloads among health personnel.

Definition of the TBA Role

Toward the end of 2009 and in the first months of 2010, CHS-Ecuador provided support for the MOH in developing a public policy proposal that defines the role of traditional birth attendants (TBA) and their inclusion into the nation's health system as part of the strategy to reduce maternal and neonatal mortality.

A participative proposal was formulated using focus groups, interviews, and workshops among various stakeholders, including TBAs, health personnel, and leaders of the country's various indigenous and afro-descendant organizations.

During the qualitative identification process, the traditional roles played by TBAs in their communities were determined in 15 provinces located in the country's three main regions: Costa (coast), the Sierra (highlands), and Amazonia (rainforest). The activities performed by traditional birth attendants are:

- Providing care for the mother during pregnancy, delivery, and the post-partum period, along with care for the newborn, in accordance with various ancestral customs.
- Caring for other health problems (treating "bad air", scare, and evil eye; providing "energetic cleansing" for children; and diagnosing diseases and cleansing with indigenous guinea pigs).
- Many TBAs practice herbal medicine, using various types of medicinal plants, and have a great deal of knowledge that they have acquired over the years from their daily lives.
- Furthermore, some midwives are identified as community leaders and also fill the role of educators; they provide counselling on the topics of sexual and reproductive health, family planning, gender-based violence, etc.
- The relations, perception, and opinion of health personnel with respect to the care provided by TBAs are still very poor on account of ethnocentrism, a lack of respect, and ignorance regarding traditional medicine.
- There are many ways to improve this relationship and to coordinate the work of TBAs in the National Health System through institutional mechanisms that strengthen the ancestral health system, including its traditional workers.

Cotopaxi TBA Focus Groups

As part of the baseline for the Cotopaxi Child Survival Project, CHS conducted a preliminary assessment of the knowledge, attitudes, and practices of the traditional birth attendants of the province. To this end, individual surveys were conducted and a focus group was held composed of 12 midwives representing the various cantons of Cotopaxi.

This qualitative assessment investigated TBA perceptions of their community work, their relationship with health personnel in facilities, as well as their openness to and interest in participating in the new model of local care that the project is proposing.

Some of the most significant findings:

- Most TBA's in the province have received prior training in the identification of antenatal, intrapartum, and postpartum danger signs, as well as in clean deliveries and newborn care; however, this knowledge has not been extended or updated.
- In most MOH facilities, there is no coordination or recognition of the work that TBAs do. MOH facility health personnel do not respect or use the referral sheet used by TBAs in accordance with the guidelines of Cross-Cultural Health ("Salud Intercultural").
- In the opinion of the TBAs, one of the principal reasons why pregnant women prefer to give birth at home is the mistreatment received by parturients in health centers; in addition, many women are distrustful or ashamed of being touched by OB/GYNs during labor.
- Because of these reasons, according to the TBAs interviewed, pregnant women from their

communities seek out unqualified midwives, since they do not refer them to health subcenters.

- Most TBA's reported that they do not ask for monetary compensation for the care that they provide for mothers; however, the family of the pregnant women usually provides the TBA with compensation in the form of an agricultural product.
- All the TBAs were in agreement that the MOH should recognize them economically for the work that they do and provide them with basic supplies, such as a delivery kit, cleaning supplies, a flashlight, rain poncho, etc.
- Most TBAs visit women on the day following their delivery, but some TBAs are not comfortable performing more than one post-natal visit because they are afraid that this could be interpreted by the mothers as interest in receiving some type of remuneration.
- Among community organizations, there is a lack of recognition of the services provided by TBAs. For example, if TBAs can not make it to community *mingas*[19] because they have to assist with a MOH training workshop, or even if they are attending deliveries or accompanying a pregnant woman to the hospital, these organizations usually do not recognize such work as being community work, and so the midwives end up having to pay a fine. TBAs proposed that the MOH hold meetings with community organization leaders, health center personnel, and partners with the goal of informing all stakeholders about the work performed by TBAs for the benefit of the community's women and newborns.
- Some TBAs have proposed that videos be recorded on the traditional way in which they attend home births in order to document their work and so that health personnel and community organizations will value the services that they provide to the community.

G. Objectives of the KPC survey

The overall goal of the project KPC survey was to establish a baseline measure of the primary project indicators to guide effective project planning, implementation, and continous improvement

Specific Objectives included;

- Obtain qualitative and quantitative data relevant to the project objectives in order to more effectively guide the priorities and strategies of the DIP.

- Measure baseline Rapid Catch USAID indicators (as required by USAID)

- Obtain qualitatitve and quantitative baseline data for Ecuador CHGSP Operations Research focused on early post-partum home care intervention to establish baseline and guide implementation and measurement of OR intervention (see OR Concept paper)

[19] A *minga* (from the Kichwa word *minka*) is an ancient pre-Hispanic tradition of community work for the collective benefit of the community. This system of reciprocity can have different goals, such as construction of housing, cleaning of an irrigation canal, or agricultural labor on community land. The individuals who participate in a minga do not receive payment. However, their work is recorded by the community ("minga lines") and may eventually be rewarded with collective labor.

III. PARTNERSHIP BUILDING

A. Methods of identifying and engaging local partners stakeholders in the KPC SURVEY

The primary partner in the implementation of this KAP survey was the Provincial Health Directorate of Cotopaxi through the provincial director, its top official, as well as through other officials from the Standards Implementation Process and the Cross-Cultural Health Sub-Process. An important cooperative relationship was established with these officials during a series of preparatory meetings:

- A preparatory meeting between the CHS Ecuador technical team and the provincial MOH cross-cultural health technical team to determine the sample and the recruitment of interviewees.
- A meeting of the Cross-Cultural Health team and the standards implementation team to review the indicators and prepare for the planning activities.
- A preliminary survey review by the provincial MOH director, the leader of Cross-Cultural Health, and the leader of the standards implementation process.
- Support was provided by the Cross-Cultural Health technical team in identifying several indigenous interviewers with experience as community health workers; their mastery of the Kichwa language allowed them to access communities where the language could constitute a barrier with greater confidence.
- Support for training of interviewers and supervisors.

Local coordination and ongoing communication between our technical team (CHS) and the officials and departments of the Provincial Health Directorate of Cotopaxi, as well as other key local actors and community leaders, represented fundamental factors in the implementation of the KPC survey.

Likewise, socialization and the positive view of community officials were key to the implementation of the KPC survey by facilitating entry into these communities and their facilities. The presence of personnel from the Department of Cross-Cultural Health in the individual zones, areas, and regions of the province generated confidence and acceptance by households and TBAs to participate in the baseline activities.

B. Specific roles of local partners/stakeholders in the writing of the proposal and the KPC survey

The Provincial Health Directorate of Cotopaxi has recognized, accepted, and given its support to the Child Survival Project proposal.

The provincial health director recognized and approved the technical research proposal and the first draft of the KPC survey. A strategic factor in this process was the provincial health director's authorization and desire for joint participation, which resulted in the appointment of officials to coordinate with CHS in planning and implementing the project. .

The Office of Cross-Cultural Health played the role of an active partner advisor, supporting the identification of survey interviewers, coordinating logistics, and helping to establish contact within the communities.
CHS contracted with a local consultatnt team to provide technical assistance for field data collection. This contracted consultant team has significant experience conducting household surveys at the national level in health-related fields, including the ENDEMAIN survey (DHS-type), with which the URC-CHS team collaborated in 2004 as part of the QAP project.

Specific technical assistance provided by the consultant team included:

- Sample design and distribution;
- Acquisition of the census mapping;
- Selecting census sectors on maps at the parish level;
- Designing the draft KPC census according to the standardized format and project indicators;
- Identification of the experiment supervisors;
- Training of the data collection staff;
- Pilot testing of the instrument;
- Field supervision of data collection;
- Data entry program development (preliminary and final);
- Training CHS technicians on data entry;
- Cleaning the database and initial output;
- Processing the information with frequency tables and reports.

IV. METHODS

A. Questionnaire development and Insitutional Review Board (IRB) approval

IRB approval: Because the baseline assessment included baseline data for the project's operations research, it was necessary to obtain IRB approval prior to collection of all baseline data. ***Annex 13*** of the Project's Detailed Implementation Plan (DIP) includes the IRB application and approval completed prior to initiation of baseline data collection.

Questionnaire Development:

The final KPC household survey tool used for the Cotopaxi project baseline incorporated and adapted three independent survey tools:

1) KPC Rapid Core Assessment Tool on Child Health (CATCH) 2008 (Version October 3, 2008)
2) Health Care Improvement (HCI) projectHousehold Survey tool of Mothers with children 0-23 months old (2010); this tool was developed for HCI maternal newborn projects in Mali and Afghanistan,
3) Knowledge, Attitudes, and Practices (KAP) Survey on maternal and neonatal health (November 22, 2010 Version) (CHS-Ecuador)

Once the CHS-Ecuador team developed a first draft of the questionnaire, the local consultant team adapted the instrument to an appropriate format to identify the indicators in each

question and to include screener questions that may skip depending on the answer to the question. This version was translated and sent to the CHS team in Bethesda for review.

The technical advisory team in Bethesda recommended that the tool be extended to include project-wide indicators and operations research indicators, ensuring that the household survey tool would include three principal categories of data essential for successful implementation of the project and related operations research:

1. Project-wide indicators
2. Operations research indicators
3. USAID Rapid CATCH Indicators (required indicators; except for malaria and anthropometric data, which was omitted with permission of USAID)

The first section of the baseline survey questionnaire adapted the HCI project Household maternal newborn survey questionnaire provided by CHS-Bethesda which includes maternal and neonatal Rapid CATCH indicators as well as additional technical content relevant to the Ecuador Child Survival project and operations research objectives/indicators.

The second section of the baseline survey questionnaire is based on the USAID 2008 Rapid CATCH surve, and includes project-specific technical maternal newborn indicators as well as required USAID rapid catch indicators beyond the technical area of focus for the project. The survey format was adapted to facilitate rapid tabulation of indicators from pertinent sections of questionnaire (see survey questionnaire tool, Annex C). Survey supervisors were alert to rapidly tabulate indicator results from individual questionnaires at the end of each day of data collection to expedite tabulation of results under key indicator categories.

Finally, the CHS-Ecuador team adapted the new version of the instrument both in format and in content, adjusting the language to the reality of Cotopaxi province (e.g., nutrition, breastfeeding, immunization, etc.) and adding on new answer choices. (See the KPC survey in Annex 3)

Annex 10 – KPC Report

B. KPC indicators

The table below summarizes the indicators measured in the KPC survey.

INTERVENTION	No.	Indicator	Numerator/Source	Denominator/Source	Question no.
Use of services: antenatal care	**1**	% of mothers of children 0-23 months of age who had four or more antenatal visits from qualified personnel, in the community and/or a health unit, when they were pregnant with their youngest child	# of mothers with children 0-23 months of age who had at least four antenatal visits when they were pregnant with their youngest child	total # of mothers with children 0-23 months of age in the study	3.3 – 3 3.4 – 3 3.5 – # =/>4 3.6 – 3 3.7 – # 4 =/>4 3.18 – # 4 =/>4
	2	% of mothers with children 0-23 months of age who did not undergo antenatal checkups	# of mothers with children 0-23 months of age who did not undergo antenatal checkups	total # of mothers with children 0-23 months of age in the study	3.1- NO
	3	% of mothers with children 0-23 months of age who received counseling on danger signs when they were pregnant with their youngest child	# of mothers with children 0-23 months of age who received counseling on danger signs when they were pregnant with their youngest child	total # of mothers with children 0-23 months of age in the study	3.9 – YES 3.19 – YES
Use of services: delivery	**4**	% of children 0-23 months of age whose birth was attended by skilled personnel	# of children 0-23 months of age whose birth was attended by skilled personnel	total # of mothers with children 0-23 months of age in the study	4.3 – 1, 2
	5	% of mothers of children 0-23 months of age who gave birth in a health facility	# of mothers of children 0-23 months of age who gave birth in a health facility	total # of mothers with children 0-23 months of age in the study	4.2 – 1 through 6
	6	% of mothers of children 0-23 months of age who did not give birth in a health facility for cultural reasons	# of mothers of children 0-23 months of age who did not give birth in a health facility for cultural reasons	total # of mothers with children 0-23 months of age in the study who did not give birth in a health facility	4.5 – 3, 4, 6, 8

Use of services: postpartum	**7**	% of mothers of children 0-23 months of age who received a post-natal visit from a qualified health worker within two days after the birth of the youngest child	# of mothers of children 0-23 months of age who received a post-natal visit from a qualified health worker within two days after the birth [sic]	total # of mothers with children 0-23 months of age in the study	5.2 – YES 5.4 – 3
	8	% of mothers of children 0-23 months of age who received a post-natal visit from a traditional birth attendant (TBA) within two days after the birth of the youngest child	# of mothers of children 0-23 months of age who received a post-partum visit from a **traditional birth attendant (TBA)** within two days after the birth [sic]	total # of mothers with children 0-23 months of age in the study	5.2 – YES 5.4 – 1
	9	% of children 0-23 months of age who were attended by qualified personnel during their first 48 hours	# of children 0-23 months of age who were attended by qualified personnel during the first 48 hours after their birth	total # of children 0-23 months of age in the study	4.2 – 1-6 (4.2 – 7-9) 5.2 – YES 5.4 – 3
	10	% of mothers of children 0-23 months of age who received care/counseling within two days of the birth of their youngest child	# of mothers of children 0-23 months of age who received care/counseling within two days of the birth of their youngest child	total # of mothers with children 0-23 months of age in the study	5.2 – YES 5.4 – 1- 5
Knowledge of Danger Signs	**11**	% of interviewees who recognize at least 2 danger signs during pregnancy	# of interviewees who recognize at least 2 danger signs during pregnancy	total # of mothers with children 0-23 months of age in the study	3.27 – 1-11
	12	% of interviewees who recognize at least 2 danger signs during delivery	# of interviewees who recognize at least 2 danger signs during delivery	Total # of interviewees	4.1 – 1-10

	13	% of interviewees who recognize at least 2 danger signs during the postpartum period	# of interviewees who recognize at least 2 danger signs during the postpartum period	Total # of interviewees	5.9 – 1-8
	14	% of interviewees who are familiar with maternal and newborn care services in their parish or canton	# of interviewees who are familiar with maternal and newborn care services in their parish or canton	Total # of interviewees	3.15 – YES
	15	% of interviewees who recognize at least 2 danger signs in newborns	# of interviewees who recognize at least 2 danger signs in newborns	Total # of interviewees	5.8 – 1-9
	16	% of interviewees who use at least 1 modern contraceptive method	# of interviewees who use at least 1 modern contraceptive method	Total # of interviewees	6.1 – 1 6.2 – 1-10
	17	% of interviewees who believe that their first postnatal checkup should be done within two days	# of interviewees who believe that their first postnatal checkup should be done within two days	Total # of interviewees	5.19 – 1
	18	% of interviewees who believe that they should wait at least two years to have another child	# of interviewees who believe that they should wait at least two years to have another child	Total # of interviewees	6.3 – 2, 3
	19	% of mothers of children 0-23 months of age who received at least two tetanus toxoid vaccines before the birth of their youngest child	# of mothers of children 0-23 months of age who received at least two tetanus toxoid vaccines before the birth of their youngest child	total # of mothers with children 0-23 months of age in the study	3.21 – YES 3.22 - # 2 3.23 – YES 3.24 – # 2
	20	% of children 6-23 months who have received a dose of vitamin A in the last 6 months: card verified	# of children 6-23 months of age who have received a dose of vitamin A in the last 6	total # of children 6-23 months of age in the study	AGE>6 months 6.14 – YES

		or according to the mother's recall	months (card verified or according to the mother's recall)		6.15 – YES 6.17 - DATE
Use of other services: required rapid catch not specific to project and ORT	**21**	% of children 12-23 months of age who have received a measles vaccination	# of children 12-23 months of age who have received a measles vaccination at the time of the interview according to the card or the mother's recall	total # of children 12-23 months of age in the study	AGE>12 months 6.17 6.21
	22	% of children 12-23 months who received DTP1 at the time of the study according to the immunization card or the mother's recall	% of children who received DTP1 at the time of the study according to the immunization card/child health booklet or the mother's recall	total # of children 12-23 months of age in the study	AGE>12 months 6.17a
	23	% of children 12-23 months who received DTP3 at the time of the study according to the immunization card or the mother's recall	% of children who received DTP3 at the time of the study according to the immunization card/child health booklet or the mother's recall	total # of children 12-23 months of age in the study	AGE>12 months 6.17c
	24	% of children 0-23 months with a chest cough and labored and/or difficulty breathing in the last two weeks who were taken to a qualified health provider	# of children 0-23 months with a chest cough and labored and/or difficulty breathing in the last two weeks who were taken to a qualified health provider	Number of children with a chest cough in the last two weeks	6.24 – YES 6.25 – YES 6.26 – YES 6.27 – 1, 2
Healthy Practices	**25**	% of children 0-5 months who were exclusively breastfed during the last 24 hours	# of children 0-5 months who have drunk breast milk in the past 24 hours AND who have not drunk other liquids in the past 24 hours AND who have not received any other food or liquid in the past 24 hours	total # of children 0-5 months of age in the study	5.26

	26	% of children 0-23 months who were breastfed immediately	# of children 0-23 months who were breastfed immediately	total # of children 0-23 months of age in the study	4.10 – 87 5.24 - 1
	27	% of infants and small children 6-23 months fed according to a minimum of appropriate feeding practices	# of infants and small children 6-23 months fed according to a minimum of appropriate feeding practices	Number of children 6-23 months of age in the study	AGE>6 months 6.5 6.13
	28	% of children 0-23 months with diarrhea in the last two weeks who received oral rehydration salts (ORS) and/or an appropriate household solution	# of children 0-23 months with diarrhea in the last two weeks AND who received oral rehydration salts (ORS) and/or an appropriate household solution	Total # of children 0-23 months of age who have had diarrhea in the last two weeks	6.22 – YES 6.23 – a, b, c
	29	% of households with children 0-23 months who provide effective water treatment	# of households of mothers with children 0-23 months who provide effective water treatment	Number of households with children 0-23 months of age in the study	6.28 – YES 6.29 – 3,4,5
	30	% of mothers of children 0-23 months who live in households with soap in the place where hands are washed	# of mothers of children 0-23 months who live in households with soap in the place where hands are washed	Number of households with children 0-23 months of age in the study	6.31 – 1, 2
	31	% of mothers of children 0-23 months who do not need the influence or presence of other persons to make the decision to go to a health facility in the event of any complications	# of mothers of children 0-23 months who do not need the influence or presence of other persons to make the decision to go to a health facility in the event of any complications	Total # of mothers of children 0-23 months in this study who experienced any complications during their last delivery	3.14 4.18 5.16

	32	% of mothers of children 6-23 months who exclusively breastfed their children until the age of 6 months	# of mothers of children 6-23 months who exclusively breastfed their children until the age of 6 months	total # of mothers with children 6-23 months of age in the study	AGE>6 months 5.25
Intention to use	**33**	% of mothers of children 0-23 months who would seek qualified care upon experiencing a complication during pregnancy	# of mothers of children 0-23 months who would seek qualified care upon experiencing a complication during pregnancy	Total # of interviewees	3.28 – YES
	34	% of mothers of children 0-23 months who would seek qualified care upon experiencing a complication during delivery	# of mothers of children 0-23 months who would seek qualified care upon experiencing a complication during delivery	Total # of interviewees	4.19 – YES
	35	% of mothers of children 0-23 months who would seek qualified care upon experiencing a complication during the postpartum period	# of mothers of children 0-23 months who would seek qualified care upon experiencing a complication during the postpartum period	Total # of interviewees	5.17 – YES
	36	% of mothers of children 0-23 months who would seek qualified care if a complication occurred in a newborn	# of mothers of children 0-23 months who would seek qualified care if a complication occurred in a newborn	Total # of interviewees	5.20 – YES
	37	% of mothers of children 0-23 months that would recommend the hospital or health center as a place to give birth	# of mothers of children 0-23 months that would recommend the hospital or health center as a place to give birth	Total # of women who gave birth in a hospital or health center	4.4 – YES

C. Sampling Design

The target population of this survey is mothers with a live child under 24 months of age living in rural parishes. A sample of rural parishes from almost every Cotopaxi counties was targeted as described below; urban parishes of the capital city, Latacunga, were not included in the sample. Given that no information exists on children under 2 years of age, the total population estimate for the year 2009 was used for the political and administrative jurisdictions of the province (from the National Statistics and Census Institute, INEC).

The sampling frame used was from the most recent Ecuador Population and Survival Census from 2001 (from INEC), which contains data organized by canton, parish, zone, and census sector (urban and rural).

Using this information, the following methodology was used to calculate the sample size:

- The confidence level was 95% and maximum margin of error (precision) was 5%;
- The sample size formula for proportions was used, given with the following expression:

$$\frac{N \quad Z_{\frac{\alpha}{2}}^2 \quad \pi(1-\pi)}{d^2(N-1)+Z_{\frac{\alpha}{2}}^2 \pi(1-\pi)}$$

Where: N = Population size
Z = Z-score (relating to confidence level)
π = Acceptable proportion – p = 0.5; q = 0.5 -
d = Maximum allowed error

Since the sample size is representative of the entire province, the formula calculated the necessary sample size for the entire province and came up with 384 surveys. Subsequently, this calculated sample size was distributed among the cantons in proportion to each canton's population size. Finally, each canton's total was distributed among the parishes in proportion to the size of each parish's population to obtain the number of samples per parish. Using these criteria, the results of the initial sampling are shown in the following table:

CANTON	PARISH	POP. 2009	% Canton	Canton sample total	% Parish	Samples per parish
Latacunga	Latacunga	35397			0.3340	38
	Aláquez	5828			0.0550	6
	Belisario Quevedo	6645			0.0627	7
	Guaytacama	8900			0.0840	10
	Joseguango Bajo	1727			0.0163	2
	Mulaló	8763			0.0827	10
	11 de Noviembre	2144			0.0202	2
	Poaló	6290			0.0593	7
	San Juan de Pastocalle	11826			0.1116	13
	Tanicuchí	10164			0.0959	11
	Toacaso	8299			0.0783	9
		105983	**0.2997**	**115**	**1.0000**	**115**

La Maná	La Maná	33826			0.8190	37
	Guasaganda	4618			0.1118	5
	Pucayacu	2858			0.0692	3
		41302	**0.1168**	**45**	**1.0000**	**45**
Pangua	El Corazón	7374			0.3116	8
	Moraspungo	13036			0.5508	14
	Pinllopata	1081			0.0457	1
	Ramón Campaña	2175			0.0919	2
		23666	**0.0669**	**26**	**1.0000**	**26**
Pujilí	Pujilí	33977			0.4907	37
	Angamarca	5830			0.0842	6
	Guangaje	8696			0.1256	9
	La Victoria	3341			0.0483	4
	Pilaló	2221			0.0321	2
	Tingo	1011			0.0146	1
	Zumbahua	14162			0.2045	15
		69238	**0.1958**	**75**	**1.0000**	**75**
Salcedo	San Miguel de	34062			0.5576	37
	Antonio José Holguín	2859			0.0468	3
	Cusubamba	6366			0.1042	7
	Mulalillo	6890			0.1128	7
	Mulliquindil	7809			0.1278	8
	Pansaleo	3097			0.0507	3
		61083	**0.1727**	**66**	**1.0000**	**66**
Saquisilí	Saquisilí	16242			0.5858	18
	Canchagua	5537			0.1997	6
	Chantilín	962			0.0347	1
	Cochapamba	4985			0.1798	5
		27726	**0.0784**	**30**	**1.0000**	**30**
Sigchos	Sigchos	9456			0.3833	10
	Chugchilán	7568			0.3067	8
	Isinliví	3941			0.1597	4
	Las Pampas	2446			0.0991	3
	Palo Quemado	1262			0.0511	1
		24673	**0.0698**	**27**	**1.0000**	**27**
Province Total		**353671**	**1**	**384**		

In Latacunga canton, the urban area was not taken into consideration during sampling. In the case of the Pujilí canton, the number of surveys was adjusted in order to apply the LQAS method. Furthermore, given the very small number of surveys to be processed in certain rural parishes (less than 4 surveys), and because of issues of cost and accessibility, the decision was made to refrain from collecting surveys from those parishes and to shift their survey number to other parishes in the same canton. The rural parishes that were omitted are: Joseguango Bajo and 11 de Noviembre (Latacunga canton); Chantilín (Saquisilí canton); Las Pampas and Palo Quemado (Sigchos canton); Pacayacu (La Maná canton); Antonio José Holguín and Panzaleo (Salcedo canton); Pinllopata and Ramón Campaña (Pangua canton).

The new sample distribution, which varies by one unit in the cantons of Latacunga, Pangua, Salcedo and Sigchos due to rounding effects, is as follows:

CANTON	PARISH	Sample	No.
Latacunga	Latacunga	40	8
	Aláquez	6	1
	Belisario	7	1
	Guaytacama	10	2
	Mulaló	9	2
	Poaló	7	1
	San Juan de	14	2
	Tanicuchí	12	2
	Toacaso	9	2
		114	**21**
La Maná	La Maná	40	7
	Guasaganda	5	1
		45	**8**
Pangua	El Corazón	9	2
	Moraspungo	16	2
		25	**4**
Pujilí	Pujilí	37	7
	Angamarca	19	4
	Guangaje	19	4
	La Victoria	19	4
	Pilaló	19	4
	Tingo	19	4
	Zumbahua	19	4
		151	**31**
Salcedo	San Miguel de	41	7
	Cusubamba	8	1
	Mulalillo	8	1
	Mulliquindil	8	2
		65	**11**
Saquisilí	Saquisilí	19	4
	Canchagua	6	1
	Cochapamba	5	1
		30	**6**
Sigchos	Sigchos	12	2
	Chugchilán	9	2
	Isinliví	5	1
		26	**5**
Province Total		**456**	**86**

To distribute the sample in each parish and obtain the number of sectors to be studied, the number of surveys to be conducted in each sector was set at 4 to 5, except for a few sectors in which as many as 8 surveys were to be performed.

Urban and rural sectors of each parish were selected randomly. However, because we needed to find households (dwellings) a child under two years of age, it sometimes became necessary to select the sectors with the highest number of households.

The table with the zones and sectors selected and the number of surveys collected in each jurisdiction is shown in **Annex D**.

Due to the small number of children under 24 months of age living in each zone, no methods

have for household selection were applied. When administering the surveys, an examination of the sector selected was first completed. Subsequently, the sector was "swept" until the total number of surveys needed for that sector's sample was collected. This sweep was performed by visiting all the dwellings that were located inside the sector in search of mothers of children under 24 months of age.

If enough mothers for the sector were not found, the missing surveys for that sector were completed in adjacent sector(s), which were selected using the +/-1 formula, until all the needed surveys were administered.

The survey was administered in a total of 122 census sectors, 30% of which were auxiliary since the sample design originally called for the use of 86 sectors.

The process of administering surveys was coordinated by the supervisors, who have extensive experience administering household surveys as well as reading and using INEC's census maps. The location of the cluster boundaries in the field was pinpointed using geographic reference points such as rivers, roads, streams, blocks, churches, and so forth.

To avoid bias, the surveys were administered exclusively to women living in the chosen sectors; they were not administered to anyone volunteering to be surveyed.

Whenever the situation arose where two mothers with children under 24 months of age were living in the same household, or where the same mother had two children under 24 months, the youngest child of the two was considered for the sake of the survey.

D. KPC training

The training of interviewers and supervisors was conducted April 14 and 15, 2010, in the province of Cotopaxi.

The first training session was facilitated by the consultant team coordinator and delivered in a workshop format in the auditorium of the Provincial Directorate of Cotopaxi in the city of Latacunga. In this workshop, the contents and implementation of the KPC survey were explained step by step and question by question. Simultaneously, CHS personnel made various adjustments and adaptations in the language and contents of the questionnaire based on local conditions and the comprehension abilities of the interviewers and interviewees. Afterwards, another member of the consultant team, who held the position of field coordinator, conducted a training session with role-playing among the interviewers.

On Thursday, April 15, four survey teams were formed for the pilot field trial, each team composed of three interviewers and one supervisor. The field trial was performed in the periphery of the city of Latacunga, in the zones of Yugsiloma, Colotoa, and Santa Bárbara. After the success of the pilot trial, final adjustments were made to the survey in the afternoon. The field coordinator presented the operations plan to collect the surveys by assigning groups to census sectors for ten days; this time period was adjusted with the agreement of the supervisors from each group and the CHS technical team.

Finally, the CHS team asked for help from the provincial immunization coordinator of the Cotopaxi Provincial Health Directorate in order to solve a problem identified during the pilot

trial with immunization records. The goal was to provide group training for interviewers and supervisors on the infant immunization schedule and immunization records found in the new child health booklet that the MOH has distributed to mothers since 2009.

The primary changes made to the survey due to the pilot trial go back to several questions and response options that were edited to match the local language, such as the province's characteristic types of foods or the immunization schedule required for the Rapid CATCH indicators.

E. Data collection and quality control procedures

Four teams, each composed of three interviewers and one supervisor, collected data over the course of 11 days, from April 19 to April 29, 2010. Because the household selection technique was not used, but instead a sweep of the census sectors, the availability of mothers for the survey was not tracked. However, the number of surveys refusals was recorded. Only three surveys were suspended because the women being interviewed did not wish to continue the interview. The average survey duration was 30 to 45 minutes.

No problems were reported related to administration of the questionnaires and informed consent forms that each woman interviewed had to sign. Nor was any serious problem experienced in covering the census sectors. The only difficulty that one team of interviewers encountered was a Sunday fair underway in one community, which made it difficult to locate individuals in their respective households.

Monitoring and quality control were managed by each team's supervisor and the field operations coordinator. Each and every supervisor demonstrated extensive experience supervising the teams in the field, conducting quality control and coverage control, handling maps, orientation and field locations. The responsibilities of the supervisors were:

- To review the distribution list assigned to their team
- To review the maps and charts of the jurisdictions assigned to their team
- To determine the paths and routes for each field operative
- To travel through the chosen sector and designate dwellings for interviews
- To position each interviewer in their selected sector (urban or rural)
- To designate workloads for each team on a daily basis
- To administer household surveys in households, if necessary
- To review the questionnaires and fill out those parts in each survey that is assigned to him/her, on a daily basis.
- To draft a coverage report
- To communicate any difficulty encountered in the operation and follow the guidelines for CHS technical staff
- Overall supervision of the field operations

F. Data management/data analysis

Once the administration of surveys began, the CSPro 4.0 data-entry program was installed on the office computers and the staff was trained on its use.

This program was designed to detect keystroke errors that can occur during data entry and to comply with various answer options and screener questions. However, an initial trial of the program was conducted and all the possible answer options were entered for each question in order to identify any program bugs in the screener questions and to make appropriate corrections. This made it possible to detect and correct various bugs. A final version of the program was then produced and the surveys entered.

The survey entry was performed by CHS-Ecuador staff (Lorena Carranza, Viviana Vallejo and Genny Fuentes). This was done in real time as the surveys administered by individual teams were completed and forwarded to CHS office. The program automatically calculated the age in months for the children of the women surveyed.

Supervision was provided by Genny Fuentes, who inspected the number and quality of surveys entered via a review of key questions that could have led to inconsistency among the responses.

After entering a total of 462 surveys, the database was handed over to a consultant team contracted for this purpose. The consultant team cleaned the database by cross-tabulating variables, checking for inconsistencies, and verifying screening questions. Finally, frequency tables were created, and tables and charts of the principal results created.

The entire project team conducted the data analysis to determine the principal findings and corresponding conclusions.

V. RESULTS

A. Tables of Results and Graphics for Principal Findings

The project, OR and Rapid CATCH baseline indicator results measured during this survey are presented in the table below:

No.	Indicators	Numerator	Denominator	Proportion	Confidence Intervals
1	% of mothers of children 0-23 months of age who had four or more antenatal visits from qualified personnel in a health unit and/or the community when they were pregnant with their youngest child	316	462	68.4	+/- 8.7%
2	% of mothers with children 0-23 months of age who did not undergo antenatal checkups	39	462	8.4	+/- 3.7%
3	% of mothers with children 0-23 months of age who received counseling on danger signs when they were pregnant with their youngest child	291	462	63.0	+/- 8.5%
4	% of children 0-23 months of age whose birth was attended by skilled personnel	333	462	72.1	+/- 8.8%
5	% of mothers of children 0-23 months of age who gave birth in a health facility	342	462	74.0	+/- 8.8%
6	% of mothers of children 0-23 months of age who did not give birth in a health facility for cultural reasons	50	120	41.7	+/- 14.5%
7	% of mothers of children 0-23 months of age who received a post-natal visit from an qualified health worker within two days of the birth of the youngest child	7	462	1.5	
8	% of mothers of children 0-23 months of age who received a post-natal visit from a traditional birth attendant (TBA) within two days of the birth of the youngest child	21	462	4.5	

9	% of children 0-23 months of age who were attended by qualified personnel during their first 48 hours	346	462	74.9	+/- 8.8%
10	% of mothers of children 0-23 months of age who received care/counseling within two days of the birth of their youngest child	290	462	62.8	
11	% of interviewees who recognize at least 2 danger signs during pregnancy	290	462	62.8	+/- 8.5%
12	% of interviewees who recognize at least 2 danger signs during delivery	229	462	49.6	+/- 7.9%
13	% of interviewees who recognize at least 2 danger signs during the postpartum period	279	462	60.4	+/- 8.4%
14	% of interviewees who are familiar with the maternal and newborn care services in their parish or canton	388	462	84.0	+/- 9.0%
15	% of interviewees who recognize at least 2 danger signs in newborns	279	462	60.4	+/- 8.4%
16	% of interviewees who use at least 1 modern contraceptive method	213	462	46.1	+/- 7.7%
17	% of interviewees who believe that their first postnatal checkup should be done within two days	116	462	25.1	+/- 6.0%
18	% of interviewees who believe that they should wait at least two years to have another child	384	462	83.1	+/- 9.0%

19	% of mothers of children 0-23 months of age who received at least two tetanus toxoid vaccinations before the birth of their youngest child	194	462	42.0	+/- 7.4%
20	% of children 6-23 months who have received a dose of vitamin A in the last 6 months: card verified or according to the mother's recall	137	329	41.6	+/- 8.8%
21	% of children 12-23 months who have received a measles vaccination	143	203	70.4	+/- 13.1%
22	% of children 12-23 months who received DTP1 at the time of the study according to the immunization card or the mother's recall	185	203	91.1	+/- 13.7%
23	% of children 12-23 months who received DTP3 at the time of the study according to the immunization card or the mother's recall		203	0.0	
24	% of children 0-23 months with a chest cough and labored and/or difficulty breathing in the last two weeks who were taken to a qualified health provider	61	88	69.3	+/- 19.9%
25	% of children 0-5 months who were exclusively breastfed during the last 24 hours	124	133	93.2	+/- 17.0%
26	% of children 0-23 months who started breastfeeding immediately	283	462	61.3	+/- 8.4%
27	% of infants and small children 6-23 months fed according to a minimum of appropriate feeding practices		329	0.0	
28	% of children 0-23 months with diarrhea in the last two weeks who received oral rehydration	71	131	54.2	+/- 15.2%

	salts (ORS) and/or an appropriate household solution				
29	% of households with children 0-23 months who effectively treat their water	300	462	64.9	+/- 8.5%
30	% of mothers of children 0-23 months who live in households with soap in the place where hands are washed	383	462	82.9	+/- 9%
31	% of mothers of children 0-23 months who do not need the influence or presence of other persons to make the decision to go to a health facility	9	16	56.3	+/- 44.1%
32	% of mothers of children 6-23 months who exclusively breastfed their children until the age of 6 months	180	329	54.7	+/- 9.6%
33	% of mothers of children 0-23 months who would seek qualified care if they experienced a complication during pregnancy	444	462	96.1	+/- 9.1%
34	% of mothers of children 0-23 months who would seek qualified care if they experienced a complication during delivery	442	462	95.7	+/- 9.1%
35	% of mothers of children 0-23 months who would seek qualified care if they experienced a complication during the postpartum period	440	462	95.2	+/- 9.1%
36	% of mothers of children 0-23 months who would seek qualified care if a complication occurred in a newborn	441	462	95.5	+/- 9.1%
37	% of mothers of children 0-23 months that would recommend the hospital or health center as a place to give birth	299	342	87.4	+/- 8.5%

VI. DISCUSSION

A. Discussion of key findings from the KPC survey and programmatic implications:

Baseline survey results are discussed under relevant project intervention categories below, including key program implications for specific project results/interventions. Because intervention/results 2 and 3 are closely inter-related with regard to baseline survey results, results and program implications for these two results are discussed under a combined category.

Intervention/Result 1: Increased availability/access to and utilization of a coordinated continuum of high-impact MNC services:

A. Antenatal care:

Ninety-two percent of mothers reported at least one prenatal care session. Most (88%) mothers received prenatal care at a facility, while only 3.8% obtained antental care in the home or community. Among women receiving facility-based prenatal care, 93% obtained the care from a MOH facility, usually the parish health center. On average, 69% of mothers in the sample reported four or more antenatal care sessions. However, these results differed by ethnicity of the respondent, with only 49% of Indian mothers reporting 4 or more antental sessions and 77% of Mestizo mothers reporting 4 or more antenatal care sessions. These numbers suggest a fairly good level of MOH facility-based coverage of prenatal care among Mestizo, with a modest potential role for TBAs in increasing this coverage at communities. The main programmatic implication for interventions related to antenatal care under result 1 is to promote increased coverage of four antenatal care session, with a strong focus on Indian pregnant women as described in the DIP.

B. *Delivery Care:*

On average, 74% percent of all mothers reported giving birth in a facility. However, as seen for antental care, skilled delivery care results vary when stratified by ethnicity: only 36% of Indian mothers reported a facility birth while 89% of Mestizo women reported a facility birth. Among all reported facility births, 61% ocurred in a MOH hospital or health center as opposed to a social security or private clinic. On average, more than a quarter (26%) of women surveyed had their babies at home, most attended by a TBA or family member or alone. In absolute numbers this means that of the approximately 8,000 annual births in Cotopaxi, approximately 2,000 births (a quarter) occur without skilled care coverage.

The main reasons reported for delivering at home included “tradition” (37%), geographical barriers (18%) and “not enough time” (23%) which is possibly related to long distances. Lack of money for related expenses was only 6%. The main programmatic implications of these results will be to prioritize interventions that promote access to and utilization of skilled care, particularly among Indian women. Interventions will focus on improving cultural responsiveness of care, geographic access to care through individual and community birth preparedness counseling and behavior change promotion, as well as interventions to improve quality of delivery care provided by TBAs and facilities (Result 3). An external baseline evaluation of quality of care provided by TBAs and health center providers is under way.

All interventions for this result will promote strong linkages between TBAs and health center teams, including sustainable continuous training and supervision processes at the local parish level, as opposed to unsustainable supervision processes at provincial or central MOH level.

C. Early post-partum Care:

Only 10% of all mothers and newborns received a home visit in the first 24 hours after birth: 6.3 % provided by TBA, 1.5% by CHW and 2.2% by "skilled provider" (EBAS). Because women are traditionally sequestered at home for 40 days after birth in the Cotopaxi province rural areas (survey sample), it can be inferred that the majority of women who deliver at home (24% of total population and 64 % of Indian women) do not benefit from any post-partum care.

Thus, during the 2-day early post-partum period, when it is known that most newborn life-threatening conditions occur, the majority of mothers and newborns surveyed reported no access to post-partum health care. The programmatic implications will be for a strong project focus on the promotion of home-based post-partum care for mother and newborn in the first 48 hours provided by either a TBA or skilled provider (EBAS team) or by TBA. Additonal facilility-level interventions will promote improved post-partum counseling and routine discharge care for facility births. Facility-level interventions will be important both for improving quality of facility post-partum care and for building the capacity of health center staff to supervise TBAs to provide high-impact early post-partum care that includes counseling, assessment of mother and newborn, recognition of danger signs and prompt referral for follow up skilled care at home or in nearest facility. Strengthening quality of early post-partum care will be an additional essential project post-partum intervention as described under intervention/results 2 and 3 below.

The coverage gap for early post-partum care is one of the major findings of the baseline survey and will be the central topic of the project Operations Research as described in the OR concept paper.

Intervention/Results 2 and 3: Improved knowledge/demand for evidence-based MNC services and improved household health practices (Result 2); Improved quality of MNC services (Result 3):

A. *Antenatal Care*:

Reported results for antenatal care counseling reveal important gaps: only 62% of respondents could remember receiving danger sign counseling and 54% could remember receiving birth preparedness counseling during pregnancy. Knowledge and reported practices related to birth preparedness are likewise low suggesting lack of or weak antenatal birth preparedness counseling in addition to other possible behavioral barriers: only 57% of mother reported implementing at least two elements of birth preparedness prior to their last birth, and only 68% were able to name 2 birth preparedness actions. A similar pattern is observed for danger sign knowledge: only 63% of mothers were able to identify at least two pregnancy danger signs and only 50% of mothers were able to identify delivery danger signs.

Only 42% of women reported receiving at least two tetanus toxoid vaccinations during pregnancy, a key indicator of quality of antenatal care services.

.

The main programmatic implication is to promote improved quality of antenatal care at facility and household level, with special emphasis on counseling for birth preparedness, household health promotion behaviors, recognition of danger signs, and prompt care-seeking.

3. Early post-partum period:

Only 60% of mothers were able to name at least two danger signs for a mother or for a newborn in the post-partum period. Only 25% of all mothers stated that postpartum care for mother and newborn should occur in the first 48 hours after birth, with 44% of respondents stating that post-partum care should occur three weeks or more after birth. Only 59% of newborns were breastfed in the first hour after birth, and 45% of respondents reported that solid or liquid foods other than breast milk had been introduced before the baby reached 6 months of age. In 70% of the births an antiseptic was applied to the umbilical cord. The lack of recognition of danger signs, weak reported breastfeeding practices, and lack of knowledge of optimal timing of post-partum care point to the importance of strengthening antenatal, birth and post-partum counseling to improve knowledge of and behavior change for these high impact post-partum practices. In particular, the implications for the current project are to prioritize interventions for BCC, including strengthening TBA capacity to provide effective evidence-based counseling. Special importance and attention will be given to building capacity for counseling by TBAs who can, if adequately trained, supervised and provided with incentives, serve as a potent counseling agent able to reach families and mothers who deliver at home.

K*nowledge and practice related to Family Planning:*
Fifty eight percent of all mothers reported using a family planning method, with only 46% of respondents reporting use of a modern method of family planning. 80% of respondents identified a minimum of 2 years as the optimum spacing between pregnancies. Although the survey did not ask women who were not using a FP method if they wanted to use a FP method, it is possible given the generally high levels of knowledge about the benefits of birth spacing, that many women who might wish to use a family planning method do not use a modern contraceptive method because of lack of access to an effective mtheod. The implication for the project will be to proactively integrate family planning counseling and services into routine antenatal and post-partum care. The post-partum period indeed, represents a critical period for the initiation of family planning for women who wish to space their pregnancies.

B. Next steps in information gathering

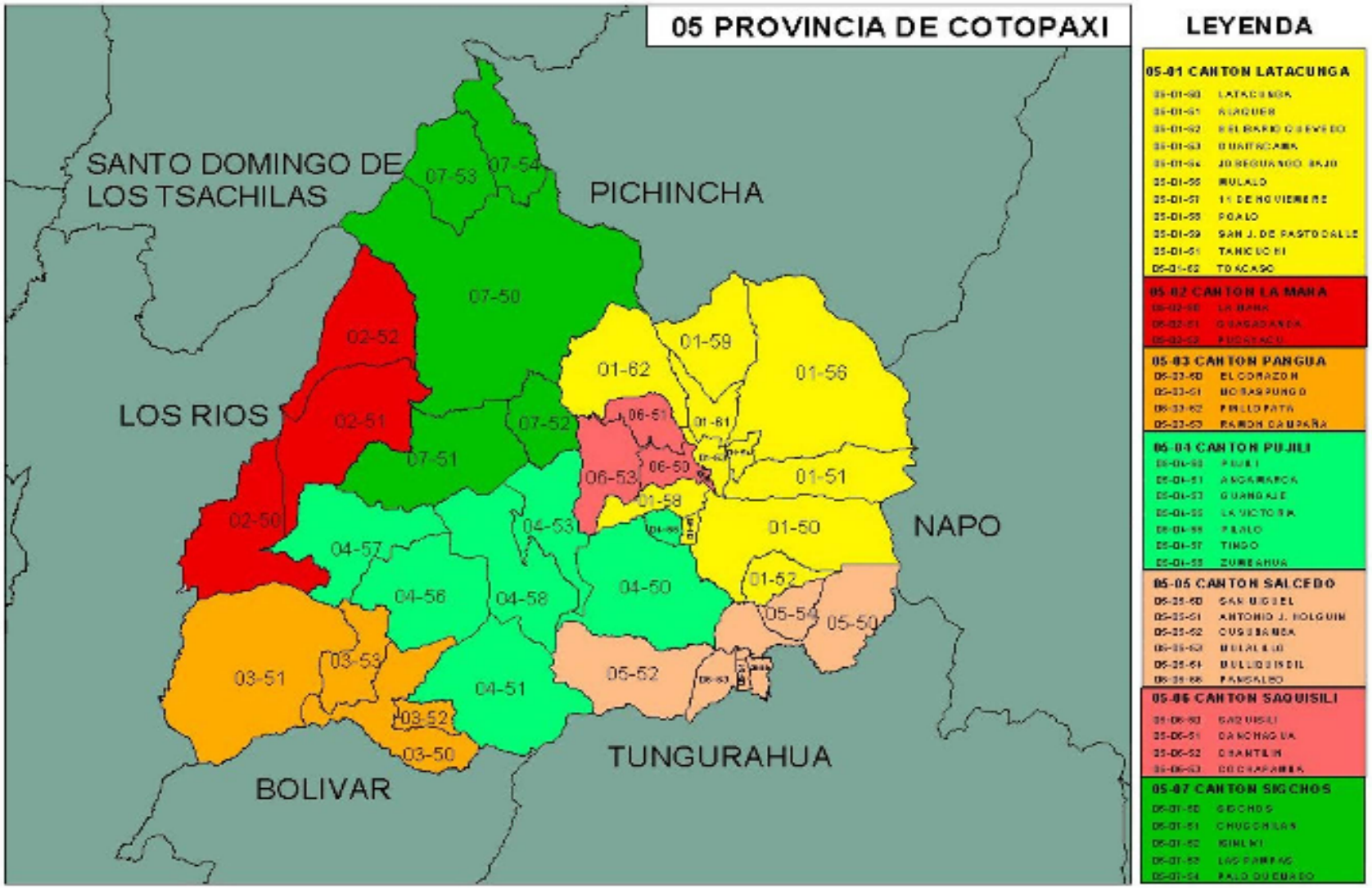
A baseline assessment of knowledge and practices of Traditional Birth Attendants is being conducted, using qualitative research methods such as focus groups, as well as survey methods and simulation to assess TBA knowledge, reported practices, competence, and linkages with facilities and skilled providers (e.g. EBAS teams). A survey of facility maternal newborn services is also being assessed. Both the TBA and facility services actively explore the current status of linkages and referral processes between community and facility-level services to help guide project strategies to strengthen effective linkages between community and facility-based services.

C. Action Plan for community feedback and dissemination of findings

A two-day meeting to share findings of the KPC household survey and to discuss the project year one work plan was held on May 26-27 with 30 staff members of the provincial MOH in Cotopaxi. As a follow on the orientation and collaboration with provincial MOH staff, the project will share KPC findings with each Parish Health Council as a basis to develop parish-level health plans during the life of the project. We will also present and share these findings with the central level of the MOH. Finally, we will share the entire KPC survey and findings with the USAID Mission in Ecuador.

VII. ANNEXES

Annex A: Map of Project Area with clusters/sampling areas identified



Annex B: Logistical Preparations and Schedule

Team Organization
Each of the four interviewer teams was composed of three interviewers under the direction of a field supervisor.

Supplies and Materials

Each interviewer and supervisor was provided with all the necessary technical materials (surveys, supervisor checklists, maps) and supplies (pens, clipboards, backpacks, plastic bags, rain ponchos). Each interviewer and supervisor was issued an identification badge with the emblem of the Provincial Health Directorate of Cotopaxi.

Transportation

Four all-terrain vehicles with drivers were hired to provide dedicated transportation services to the four working teams for 11 days.

Accommodations

Accommodations were provided for any interviewer to require them due to the distance from their houses [to the survey site] during administration of the surveys.

Operations Plan

Schedules and routes were organized (cantons, parishes, census sectors, communities, and dwellings for each team) along with the dates and duration for each group and sector Mario Chávez and Daniel González, the CHS trainers, accompanied the teams to help supervise the surveys and coordinate logistics.

The operations plan for the collection of surveys and the census sector assignments for the groups are shown below:

SAMPLE SELECTION AND DISTRIBUTION (GROUP A) SILVANA QUINATOA

CODE			**CANTON**	**PARISH**	**ZONE**	**SECT.**	COMMUNITIES; DWELLINGS; NEIGHBORHOODS	SURVEY No.
O5	O1	50	**Latacunga**	Latacunga (Periferia)	999	77	Isimbo Ejido; Isimbo Nro.2; Cuipila	**5**
O5	O1	50		Latacunga (Periferia)	999	92	Bellavista	**5**
O5	O1	50		Latacunga (Periferia)	999	107	Cundualó; Igllagua Hcda. Flores	**5**
O5	O1	50		Latacunga (Periferia)	999	2	Patután	**5**
O5	O1	50		Latacunga (Periferia)	999	17	Tilipulo Grande	**5**
O5	O1	50		Latacunga (Periferia)	999	32	San José de Pichul	**5**
O5	O1	50		Latacunga (Periferia)	999	47	San Rafael	**5**
O5	O1	50		Latacunga (Periferia)	999	62	Santán Grande	**5**
O5	O1	51		Aláquez	1	1	*Parish center*	**6**
O5	O1	53		Guaytacama	1	2	*Parish center*	**5**
O5	O1	53		Guaytacama	999	21	Santa Inés; Nintanga; Guaytacama; Rumipamba	**5**
O5	O1	56		Mulaló	1	1	*Parish center*	**4**
O5	O1	56		Mulaló	999	14	Tambo Mulaló; El Rosal; Quisinche Alto; Salatilín; Mulaló	**5**
O5	O1	61		Tanicuchi	1	1	*Parish center*	**6**
O5	O1	61		Tanicuchi	921	1	*Urban perimeter*	**6**
O5	O1	62		Toacaso	1	1	*Parish center*	**5**
O5	O1	62		Toacaso	999	4	Chilche; Guingopana; Chisulchi Chico; Chisulchi Grande	**4**
O5	O1	52		Belisario Quevedo	999	20	Santa Rosa; Contadero	**7**
O5	O1	59		San Juan de Pastocalle	1	1	*Parish center*	**7**
O5	O1	59		San Juan de Pastocalle	999	31	Niño san Antonio	**7**
O5	O1	58		Poaló	999	9	San Vicente	**7**
							TOTAL SURVEYS	**114**

SAMPLE SELECTION AND DISTRIBUTION (GROUP B) JOSE CABRERA

CODE			**CANTON**	**PARISH**	**ZONE**	**SECT.**	COMMUNITIES; DWELLINGS; NEIGHBORHOODS	**SURVEY No.**
O5	O6	51	**Saquisili**	Canchagua	1	1	*Parish center*	**6**

O5	O6	50		Saquisili	1	1	*Canton center*	**5**
O5	O6	50		Saquisili	1	11	*Canton center*	**5**
O5	O6	50		Saquisili	999	10	Salacalle Buena Esperanza	**5**
O5	O6	50		Saquisili	999	23	Salamalas San Francisco; Tamborhuaco	**4**
O5	O6	53		Cochapamba	999	2	Yanahurco Grande; Yacupungo; Potreropungo; Sacha Potrero; Yantapugro	**5**
O5	O7	50	**Sigchos**	Sigchos	1	3	*Canton center*	**6**
O5	O7	50		Sigchos	999	27	Guishuna; Pilacoa; Colaguila	**6**
O5	O7	51		Chugchilan	999	7	Chugchilán; Hito Pungo Alto; Hito Pungo Bajo; Margarita; Sigue; La Moya	**4**
O5	O7	51		Chugchilan	999	15	Angahuana; Pasoloma; Sigsiloma; Punta Loma; Tonducto; Lapac; Moreta Ugshaloma; Quesería; Condoructo	**5**
O5	O7	52		Isinliví	999	10	La Provincia; Almuerzo Pugro; Samilpamba.	**5**
O5	O4	53	**Pujilí**	Guangaje	1	1	*Parish center*	**5**
O5	O4	53		Guangaje	999	8	Coop. 8 de septiembre; Cuchumbo; Tegna Loma; Gualamalac	**5**
O5	O4	53		Guangaje	999	16	Toro Pugro; Casa Quemada; Ugshaloma Grande	**4**
O5	O4	53		Guangaje	999	24	Culahuangu; Tunipamba; Tapialoma; Casha Loma	**5**
O5	O5	50	**Salcedo**	San Miguel de Salcedo	1	1	*Canton center*	**6**
O5	O5	50		San Miguel de Salcedo	2	6	*Canton center*	**6**
O5	O5	50		San Miguel de Salcedo	999	10	Salgue José	**6**
O5	O5	50		San Miguel de Salcedo	999	26	Rumipamba de Avas	**6**
O5	O5	50		San Miguel de Salcedo	999	41	Yanayacu	**6**
O5	O5	50		San Miguel de Salcedo	999	58	Leibiza	**5**
O5	O5	50		San Miguel de Salcedo	999	72	Hcda. El Galpón; Galpón Granadero	**6**
							TOTAL SURVEYS	**86**

SAMPLE SELECTION AND DISTRIBUTION (GROUP C) EDGAR LIMA

CODE			**CANTON**	**PARISH**	**ZONE**	**SECT.**	COMMUNITIES; DWELLINGS; NEIGHBORHOODS	**SURVEY No.**
O5	O2	50	**La Maná**	La Maná	1	2	*Canton center*	**6**
O5	O2	50		La Maná	2	5	*Canton center*	**6**
O5	O2	50		La Maná	3	5	*Canton center*	**5**

O5	O2	50		La Maná	4	5	*Canton center*	**6**
O5	O2	50		La Maná	999	5	San Cristóbal; Manguila Chico; Manguilita.	**6**
O5	O2	51		Guasaganda	999	10	Coop. 21 Nov.; S. Antonio Guasaganda; Coop. Guasaganda; El Tesoro; S. Marcos	**5**
O5	O2	50		La Maná	999	16	El Moral	**5**
O5	O2	50		La Maná	999	28	San Pedro; San José del Estero; Chuspitambo; Hcda. Puembo	**6**
O5	O3	51	**Pangua**	Moraspungo	999	9	El Limón; Esperanza de Jalligua; Isabel María; Hcda. Los Sabanales; Jalligua Alto	**8**
O5	O3	51		Moraspungo	1	2	*Parish center*	**8**
O5	O3	50		El Corazón	1	2	*Canton center*	**5**
O5	O3	50		El Corazón	999	14	Sicoto; Chilcaloma; El Empalme	**4**
O5	O4	51	**Pujilí**	Angamarca	1	1	*Parish center*	**5**
O5	O4	51		Angamarca	999	6	Llimilliví Bajo; Ramos Playa; Pailacocha	**4**
O5	O4	51		Angamarca	999	13	Shuyo Grande; Quilaló; Huantugloma; Sigsipamba; Shiraugsha	**5**
O5	O4	51		Angamarca	999	20	La Estancia; Chime Alto; Yacutocma	**5**
O5	O5	52	**Salcedo**	Cusubamba	1	3	*Parish center*	**8**
O5	O5	53		Mulalillo	1	1	*Parish center*	**8**
O5	O5	54		Mulliquindil	1	1	*Parish center*	**4**
O5	O5	54		Mulliquindil	999	17	Palama; Palama Chaupi	**4**
							TOTAL SURVEYS	**113**

SAMPLE SELECTION AND DISTRIBUTION (GROUP D) CHRISTIAN EGAS

CODE			**CANTON**	**PARISH**	**ZONE**	**SECT.**	COMMUNITIES; DWELLINGS; NEIGHBORHOODS	**SURVEY No.**
O5	O4	50	**Pujilí**	Pujilí	999	34	El Calvario; Pato de Izurietas	**5**
O5	O4	50		Pujilí	2	8	*Canton center*	**6**
O5	O4	50		Pujilí	1	1	*Canton center*	**6**
O5	O4	56		Pilalo	1	1	*Parish center*	**5**
O5	O4	56		Pilaló	999	3	La Virgen; Corralpungo	**5**
O5	O4	56		Pilaló	999	6	Yanasacha; Redrován; Milín	**5**

O5	O4	56	Pilaló	999	9	Minchoa; Camac; Anacocha; Choasilli; Pucará; San Luis; Chontapamba	**4**
O5	O4	57	Tingo	1	2	*Parish center*	**4**
O5	O4	57	Tingo	999	3	El Palmar; Negrillo	**5**
O5	O4	57	Tingo	999	7	Macuchi; Puembo Chico; El Progreso	**5**
O5	O4	57	Tingo	999	10	Puembo; San Vicente de Puembo	**5**
O5	O4	58	Zumbahua	1	2	*Parish center*	**5**
O5	O4	58	Zumbahua	999	10	Chicho; Caucho	**4**
O5	O4	58	Zumbahua	999	22	Yanashpa; Yanatura	**5**
O5	O4	58	Zumbahua	999	38	Chimbacucho; Tigua Páramo Alto	**5**
O5	O4	50	Pujilí	999	17	San Juan	**5**
O5	O4	50	Pujilí	999	68	Cuturiví Chico	**5**
O5	O4	50	Pujilí	999	52	Jesus de Nazareth; Jesús del Gran Poder	**5**
O5	O4	50	Pujilí	999	84	La Merced; 20 de Diciembre; Potrerillos; Hcda. Selva Alegre; San Gerardo de Alapamalag; Hcda. Las Rejas; Hcda onterey; 5 de Junio.	**5**
O5	O4	55	La Victoria	1	1	*Parish center*	**5**
O5	O4	55	La Victoria	999	4	Santa Rosa; El Tejar	**5**
O5	O4	55	La Victoria	999	7	El Calvario	**4**
O5	O4	55	La Victoria	999	11	Milinliví	**5**
						TOTAL SURVEYS	**113**

Annex C: Survey Questionnaire in English and Spanish

Informed Consent Form

Organization: Center for Human Services (CHS)
Sponsoring Organization: USAID
Project: Cotopaxi, Ecuador Essential Obstetric and Neonatal Care (EONC) Project
Operations Research Topic: *Understanding Barriers, Opportunities and Outcomes of Early Home-Based Postpartum Care by Traditional Birth Attendants*

Purpose: The proposed research will examine current barriers (and opportunities) to the introduction of early post-partum care including improved care- seeking and follow-through with referrals for complications.

Procedures: The interview will take place in a location that is convenient for you. This interview is expected to take 30 minutes to an hour. You will be interviewed by a trained data collector.

Foreseeable risks and discomforts: This study poses minimal risk. You may experience some inconvenience about sharing an opinion or comment about your role, responsibility and practices, or the roles, responsibilities, and practices of other community members. To minimize the risks, you will be interviewed by a same-sex interviewer in a private place. We will not use your name in the research findings.

Confidentiality: All data collected as part of the study will be kept confidential and will be securely stored at the local project office. No data collection tools or notes will include your name in order to protect your privacy.

Voluntary Participation: You may choose not to participate in this evaluation if you do not wish to do so. You may also choose to stop participating at any time during the interview without any negative consequences. Participation is completely voluntary.

Benefits from the Study: Information from the study will be used to improve postpartum home-based care, TBA support and functionality, health system linkages, and service delivery in local communities.

Who to Contact: If you have any questions you may ask them now or later, even after the study has started. If you wish to ask questions later, you may contact Mario Chávez, Co-Researcher (local contact), via phone at (222-22-119) or via email at mchavez@ecnet.com.

Do you have any questions?

_____ _____
(Interviewer Signature) (Date)

Note : The signature indicates that the interviewer has read this document and informed the potential interviewee.

Do you agree to participate in this study ? Yes ☐ 1 No ☐ 0

_____ _____
(Interviewed Signature) (Date)

Note: A signature is required if the potential interviewee is literate and/or can sign. If the person is illiterate, please write N/A. In this case, the interviewee's signature is sufficient.

Knowledge, Attitudes and Practices (KAP) Survey on Neonatal and Maternal Health
2010

To be eligible for this survey, the woman must have at least one child who is 0-23 months old

Ask the mother if she has children under 24 months who live with her. If yes, proceed with the interview. If no, thank the mother and end the interview.

Questionnaire Nº : /_____/_____/_____/

I. GEOGRAPHIC AND SAMPLING DATA
1.1 PROVINCE: _____ /_____/_____/ **1.2** CANTON: _____ /____/____/____/____/
1.3 CITY OR RURAL PARISH: _____ /____/____/____/____/____/____/____/
1.4 COMMUNITY, NEIGHBORHOOD: _____
1.5 ZONE Nº: /_____/_____/_____/ **1.6** SECTOR Nº: /_____/_____/ **1.7** BLOCK Nº: /_____/_____/
1.8 ADDRESS (Street, road) _____

INTERVIEW RESULT			
No. of visits	**1**	**2**	**3**
Date of visits	Day ⌊___⌋⌊___⌋ Month ⌊___⌋⌊___⌋	Day ⌊___⌋⌊___⌋ Month ⌊___⌋⌊___⌋	Day ⌊___⌋⌊___⌋ Month ⌊___⌋⌊___⌋
Start time of interview	Hour ⌊___⌋⌊___⌋ Min. ⌊___⌋⌊___⌋	Hour ⌊___⌋⌊___⌋ Min. ⌊___⌋⌊___⌋	Hour ⌊___⌋⌊___⌋ Min. ⌊___⌋⌊___⌋
End time of interview	Hour ⌊___⌋⌊___⌋ Min. ⌊___⌋⌊___⌋	Hour ⌊___⌋⌊___⌋ Min. ⌊___⌋⌊___⌋	Hour ⌊___⌋⌊___⌋ Min. ⌊___⌋⌊___⌋
Result (*)	⌊____⌋	⌊____⌋	⌊____⌋
(*)Result Code: Completed…….…….. 1 Respondent not at home…… 2 Postponed ……..…… 3 Refused …… 4 Other (specify) _____ …. 5	Name of Interviewer: _____ Name of Supervisor: _____		
PROCESSING	**Code**	**Date**	
Coded:	/_____/	_____	
Entered:	/_____/	_____	

A. Sociodemographic Characteristics

II. CHARACTERISTICS OF MOTHER AND CHILD UNDER 24 MONTHS OF AGE			
2.1	What is your exact age in years?	/_____/_____/ Years	
2.2	What is the highest level of education you have attained? **[Note: Choose only one response]**	No school …….. Incomplete Primary School …… Completed Primary School …… Incomplete Secondary School …….. Completed Secondary School ……... Technical training …… University studies …… Other, specify:_____	0 1 2 3 4 5 6 8
2.3	How do you identity yourself?: **[Note: Read the options available. Register only one answer]**	Black? …… Mulatta? …… White? ……... Mestiza? …… Indigenous? …….. Other, specify: _____	1 2 3 4 5 88
2.4	What is your <u>main</u> activity or occupation?	Housewife …… Peasant worker …… Housekeeper …… Public sector worker …… Trader …… Industry worker …… Private employee …… Student …… Other, specify: _____ No response ……	1 2 3 4 5 6 7 8 88 99
2.5	What is your current marital status?	Single …….. Married …….. Divorced …… Separated …… Widow …… Common-law marriage …… No response ……	1 2 3 4 5 6 99
2.6	During your life, how many children have you had who were **<u>born alive</u>**?	/_____/_____/ No response	 99
2.7	How many living children do you currently have, even if they do not live with you?	/_____/_____/ No response	 99
2.8	What is the name of your youngest child?	_____	
2.9	Sex of youngest child:	Male …… Female ……...	1 2
2.10	Date of birth of (NAME)?	Day: /_____/_____/ Month: /_____/_____/ Year: /_____/_____/_____/_____/	
2.11	**INTERVIEWER:** calculate how many months old is (NAME). If child is less than one month old, write "00"	/_____/_____/ Months	

B. PRACTICE AND CARE DURING PREGNANCY

III. PRACTICE AND CARE DURING PREGNANCY			
3.1 (I2)	Did you have any prenatal checkups when you were pregnant with (NAME)?	Yes …… No ……..	1 2 →**3.21**
3.2	During your pregnancy with (NAME), how many months pregnant were you when you had your first prenatal checkup?	/_____/ Months	

3.3	Where did you receive a prenatal checkup? **[Note: Choose all responses given by the woman. Do not read the list of possible responses. Jumps should only be done when response is option 2 or 3 exclusively]**	At home (her home) …… In the village …… In the health center …… Not Applicable ……	1 2→**3.6** 3→**3.15** 9
Prenatal Service Utilization at Home or in the Village			
3.4	If **at home**, from whom did you receive prenatal care? **[Note: Choose all responses given by the woman.]**	Community health worker (CHW) …… Traditional birth attendant (TBA) …… Skilled health worker (doctor, nurse, midwife) …….. Other (specify):_____ Not Applicable ……	1 2 3 4 99
3.5	How many times did you receive prenatal services **at home** during your last pregnancy?	/_____/_____/ Nº of checkups Not Applicable ……	 99
3.6	**Interviewer, see Q. 3.3. If the woman received prenatal checkups in the village, ask the following questions; otherwise, jump to Q.3.8** If **in the village** from whom did you receive prenatal care? **[Note: Choose all responses given by the woman.]**	CHW …….. Traditional birth attendant (TBA) …… Skilled health worker (doctor, nurse, midwife) …… Other (specify): _____ Not Applicable ……..	1 2 3 4 99
3.7	How many times did you receive prenatal services in the village during your last pregnancy?	/_____/_____/ Nº of checkups Not Applicable ……	 99
Did the woman have at least 4 prenatal visits in her home and/or village? **Yes___ No___**			
Content of Prenatal Services at Home or in the Village			
3.8	During prenatal services provided **at home (or in the village)** by ["name of the community health worker"], did you receive advice about how to prepare for birth?	Yes …… No …… Does not know …… Not Applicable ……	1 2 3 99
3.9	During prenatal services provided **at home (or in the village)**, did you receive advice on danger signs that may indicate a pregnant woman is sick and needs to see a health care provider?	Yes …… No …… Does not know …… Not Applicable ……	1 2 3 99
3.10	What other services/care by ["name of the community health worker"] did you receive? **[Note: Do not read the list of possible responses. Choose all responses given by the woman.]**	Received folic acid …… Received the tetanus vaccine …… Received advice about the importance of eating more/eating a variety of foods …… Physical exam for maternal complications during pregnancy …… Received counseling on danger sings …….. Received counseling about preparation for birth …. Received counseling on newborn care …….. Received information about family planning ……. Other (specify): _____ Not Applicable ……	1 2 3 4 5 6 7 8 9 99
3.11	Did the ["name of community agent"] tell you that you had a problem related to your pregnancy and that it was necessary to go to the health center for special care?	Yes …….. No …… Does not know …….. Not Applicable ……	1 2 3 99
3.12	If yes, did the ["name of community agent"] refer you to a health center because of problems related to your pregnancy?	Yes …….. No …… Does not know …….. Not Applicable ……...	1 2 3 99
3.13	If yes, were you able to go within the time frame recommended by the ["name of community agent"]? [Note: Choose only one response.]	Yes …… No …….. Does not know (if the health worker did not recommend a time frame) …….. Not Applicable ……..	1 2 3 99

3.14	Who was the primary person who made the decision to allow you to visit a health center? **[Note: Choose only one response.]**	Herself …… Husband …… Head of the household …… Oldest woman in the household …… Other (specify): _____ Does not know …… Not Applicable ……	1 2 3 4 5 6 99
Prenatal care at the Health Center			
3.15	Do you know if there are any health facility that provides care for pregnant women, mothers and newborns in this parish or canton?	Yes …… No …… Does not know/ does not remember ……	1 2 9
3.16	**Interviewer, see Q 3.3 If the woman received prenatal care/counseling at a health center ask the following questions, otherwise jump to Q 3.21:** If you received prenatal checkups **at a health facility** when you were pregnant with (NAME), Where did you go **more frequently**?	MOH Hospital …… MOH Health Center/Sub-center …… EISS Hospital/clinic …… Peasant Social Security …… Police or Armed Forces Hospital/clinic …… Private Clinic/Doctor …… Workplace clinic …… Other, specify? _____ Does not know/ does not remember……	1 2 3 4 5 8 9 88 99
3.17	Who provided most prenatal checkups when you were pregnant with (NAME)?	Doctor …… Midwife …… Nurse …… Auxiliary nurse …… Other, specify? _____ Does not know/ does not remember……	1 2 3 4 5 8
3.18	How many times did you receive prenatal care at the health center during your last pregnancy?	/_____/_____/ Nº of checkups Not Applicable ……	 99
3.19	At the health center where you received prenatal checkups, did you receive counseling on how to care for yourself during pregnancy, and identify danger signs for you or (NAME) who was going to be born?	Yes…… No …… Does not know/ does not remember……	1 2 99
3.20	At the health center where you received prenatal checkups, did you receive counseling on how to prepare for the delivery and birth of (NAME)?	Yes …… No …… Does not know/ does not remember……	1 2 99
Did the woman have at least 4 prenatal visits to the health center during her last pregnancy? **Yes___ No___**			
Did the woman have at least 4 combined prenatal checkups, at the community and at home, during her last pregnancy? **Yes___ No___**			
Tetanus Vaccination during Pregnancy			
3.21	During your pregnancy with (NAME) did you receive an injection in the arm to prevent the baby from getting tetanus (convulsions) after birth?	Yes…… No …… Does not know/ does not remember ……	1 2 9 } **3.23**
3.22	While pregnant with (name), how many times did you receive such an injection?	/_____/ Nº of times	
3.23	Did you receive any Tetanus toxoid injection at any time before that pregnancy?	Yes…… No …… Does not know/ does not remember ……	1 2 3 } **3.25**
3.24	Before the pregnancy with (NAME), how many times did you receive a tetanus injection?	/_____/ Nº of times	

Did the woman received at least 2 Tetanus toxoid injections before the birth of youngest child?: **Yes____ No____**			
Birth Preparation			
3.25	What sort of preparations did you and your family make before the birth of your last child? **[Check all responses given by the woman. Do not list all possible responses.]**	Identified the center where she should go to give birth Identified a skilled provider or a TBA to assist with the birth …….. Identified a place where she can go in case of emergency …….. Put money aside …… Prepare the birth kit (cloth, soap, etc.) ……. Identified a transportation method for rapid evacuation in case of emergency …… Identified a blood donor …….. Planned support from family members (assistants, infant caretakers, etc.) …….. Prepare documents (ID, carnet, in case of having insurance, etc.) …….. Other, specify?_____ No preparations made ……	1 2 3 4 5 6 7 8 9 10 99
The woman implemented at least 2 birth preparedness elements (A-I)? **Yes____ No____**			
3.26	In your opinion, what should a pregnant woman and her family do to properly prepare themselves for the birth? **[Check all responses given by the woman. Do not read the list of possible responses.]**	Identify the center where the woman should go to give birth Identify a skilled provider or TBA to assist with the birth Identify a place where she can go in case of emergency Put money aside Prepare the birth kit (cloth, soap, etc.) Identify a transportation method for rapid evacuation in case of emergency Identify a blood donor Plan support from family members (assistants, infant caretakers, etc.) Prepare documents (ID, carnet, in case of having insurance, etc.) Other, specify?_____ No response given	1 2 3 4 5 6 7 8 9 10 99
The woman knows at least 2 birth preparedness elements (A-I)? **Yes____ No____**			
Danger signs for a Pregnant Woman			
3.27 (I10)	During any pregnancy, women can experience problems or serious illnesses and should immediately seek care at a health facility. What danger signs would prompt you to seek immediate care at a health facility? **[Check all spontaneous responses given by the woman that match the alternatives.] Repeat the question adding: What else?**	Severe stomach ache …… Vaginal bleeding…….. Fever ……. ……. Water breaks …… Swollen feet, hands, or face ……. Lack of fetal/baby movement ……. Fainting, loss of consciousness …….. Vision problems/blurred vision …… Convulsions …… Other, specify? _____ Does not know…….. No response ……..	
The woman knows at least 2 birth danger signs for a pregnant woman (A-H)? **Yes____ No____**			

3.28	If you become pregnant again and have any problem, illness or complication **during your pregnancy**, would you seek some form of care?	Yes …….. No …… Does not know ……	1 2 →**4.1** 9 →**4.1**
3.29	Where would you **mainly** go to?	MOH Hospital …… MOH Health Center/Sub-center …… EISS Hospital/clinic …….. Peasant Social Security …….. Police or Armed Forces Hospital/clinic …… Private clinic/doctor …….. Workplace clinic …… TBA …….. Other, specify? _____ Does not know/ does not remember……..	1 2 3 4 5 6 7 8 88 99

C. CARE RECEIVED DURING LABOR AND BIRTH

IV. Danger Signs during Birth			
4.1 (I11)	During delivery, what problems, symptoms or signs do you think indicate danger for the mother or child and that care should be sought from a health provider? **(MARK ALL SPONTANEOUS ANSWERS THAT COINCIDE WITH THE ALTERNATIVES)**. Repeat the question adding **What else?**	TBA says that the baby is incorrectly positioned Absence of or minimal fetal movement Prolonged labor Fever …… Headache / Blurred vision Convulsions …… Difficulty breathing Placenta is retained ……..…… Loss of consciousness…… Profuse bleeding…….. Other, specify? _____ Does not know…….. No response ……..	1 2 3 4 5 6 7 8 9 10 88 99
The woman knows at least 2 birth danger signs that can occur during birth (A-H)? **Yes____ No____**			
Delivery Assistance, Location and immediate post-partum practices			
4.2	Where did you give birth to (NAME)? **[Note: Choose only one response.]**	MOH Hospital …… MOH Health Center/Sub-center …… EISS Hospital/Clinic …….. Peasant Social Security …….. Police or Armed Forces Hospital/Clinic …… Private Clinic/Doctor …… At home with TBA …….. At home with relative …… Alone during birth…… Other, specify? _____ Does not know/ does not remember ……..	1 2 3 4 5 6 7 8 9 88 99
4.3	Who assisted you with the delivery of (NAME)? **[Choose only one response. If more than one provider is cited by the woman, choose the most skilled provider.]**	Doctor …… Midwife …… Nurse…….. TBA …….. Relative …… Alone during delivery…… Other, specify? _____ Does not know/ does not remember ……..	1 2 3 4 5 6 8 9
The woman was assisted by a skilled provider during her last birth? **Yes____ No____**			
4.4	**Interviewer: See Q 4.2; if the woman gave birth in a health facility, ask the following question, otherwise jump to Q 4.5:**	Yes…… No …… Does not know/ …….... Not Applicable ……	1 2 3 **4.10**

	Would you recommend to a friend or relative giving birth at the facility where you delivered (NAME)?		99
4.5 (I6)	**Interviewer: See Q 4.2; if the woman did NOT give birth at a health facility, ask:** Which is the main reason you did not deliver (NAME) in a health facility?	Geographical barriers (distance, bad roads, etc.) There was no transportation at the village Did not have time to get there…… Husband/partner was opposed …….. Relatives were opposed …….. Did not have money to pay …… Facility care is deficient…… ……. Home delivery is customary/traditional …… Other, specify? _____ Does not know/ does not remember …….. Not Applicable ……	1 2 3 4 5 6 8 9 10 11 99
4.6	Was anything placed on the umbilical cord either before or after it was cut?	Yes No Does not know	1 2→**4.8** 9→**4.8**
4.7	What was mainly placed on the cord?	Traditional remedies (herbal infusions, ointments, plaster) Antiseptics (alcohol, hydrogen peroxide, etc.) Other, specify: _____ Does not know Not Applicable	1 2 8 88 99
4.8	Was (NAME) dried (wiped) immediately after birth before the placenta was delivered?	Yes No Does not know	1 2 9
4.9	Was (NAME) wrapped in a warm cloth or blanket immediately after birth before the placenta was delivered?	Yes No Does not know	1 2 9
4.10	How long after birth did you first put (NAME) to the breast?	Immediately Hours: _____ Days: _____ Other, specify: _____ Don't remember	87 88 99
Breastfed within one hour of birth? **Yes____ No____**			
Essential Newborn Care provided? (dried/warmed; cord care; BF within one hour) **Yes____ No____**			
Management of Obstetrical Emergencies during Home Deliveries			
4.11	**Interviewer: See Q 4.2; if the woman gave birth at home, ask the following question, otherwise jump to Q 4.19:** Did you or the newborn (NAME) have a serious problem for which you had to seek immediate help during labor?	Yes…… No …….. Does not know/does not remember Not Applicable	1 2 →**4.19** 9 →**4.19** 99
4.12	What serious problem or emergency did you have?	_____ Not Applicable	 99
4.13	Did the ["name of the community health worker"] tell you that you had a problem related to birth that required you to go to a health center?	Yes…… No …….. Does not know/does not remember Not Applicable	1 2 9 99
4.14	During your home birth, did ["name of the community health worker"] refer you to a health center because of a problem related to the birth?	Yes…… No …….. Does not know/does not remember Not Applicable	1 2 9 99
Referral made to Health Center during birth by TBA or CHW) **Yes____ No____**			

4.15	Did you go to a health facility to receive care for this problem?	Yes…… No …….. Not Applicable	1 2 →**4.19** 99
Follow-through with referral **Yes____ No____**			
4.16	If yes, tell me which things helped getting to the health facility? **[Choose all responses given by the woman. Do not read aloud the responses.]**	Immediate access to community transportation (motorcycle, wagon, bicycle, vehicle and fuel) Coordination by husband or other family member to facilitate evacuation Communication method with health facility Availability of a selected community "leader" who facilitated the evacuation Availability of a "community health worker" who facilitated the evacuation Immediate access to means of payment Immediate access to a skilled provider Accompanied by a community health worker Other [specify]: _____ No response given by the woman	1 2 3 4 5 6 7 8 88 99
4.17	In the end, were you able to get to the health facility?	Yes…… No …….. Not Applicable	1 2 9
4.18	Who made the decision to allow you (or not allow you) to go to the health center? **[Choose only one response]**	Herself Husband Head of the household Oldest woman in the household Relative Other (specify): _____ Does not know/ does not remember Not Applicable	
4.19	If you were to give birth again and had a problem, difficulty or complication **during delivery**, would you seek some form of care?	Yes …….. No …… Does not know	1 2 →**5.1** 9 →**5.1**
4.20	Where would you **mainly** go to?	MOH Hospital…… MOH Health Center/Sub-center …… EISS Hospital/Clinic …… Peasant Social Security …….. Police or Armed Forces Hospital/Clinic …… Private clinic/doctor …… TBA …… Other, specify? _____ Does not know/ does not remember……..	1 2 3 4 5 6 7 88 99

D. POSTPARTUM CARE

V. Use of Postnatal Care Services			
5.1	**[Interviewer: See Q 4.2; if the woman gave birth <u>at a health facility</u>, ask the following question, otherwise jump to Q 5.2]** After you gave birth to your last child at the health center, did you stay there for at least 2 days?	Yes No Not Applicable	1 2 99
5.2	Did you receive post-partum care or counseling from a health worker within **<u>two days following the birth</u>** of (NAME)?	Yes No Not Applicable	1→**5.4** 2 9
5.3	Did you receive postnatal care/counseling **<u>during the first week after the birth</u>** of (NAME) at home, in the village, at the health center, or elsewhere? [	Yes No Not Applicable	1 2→**5.8** 99

5.4	If yes, where did you receive postpartum care/counseling? **[Choose all responses given by the woman. Do not read the possible responses.]**	Home visit by a TBA Home visit by a CHW Home visit by a skilled provider Health center/Hospital Private health clinic Not Applicable	1 2 3 4→**5.8** 5→**5.8** 99
Received post-partum care visit within 2 days of birth **Yes____ No____**			
Content/Quality of Postnatal Home Visits			
5.5	During the postnatal home visit, did you receive counseling on the following topics: **[Read each alternative and mark the code if answer is affirmative]** **[Note: Make sure the woman fully understands what you asked]**	What a new mother must do to take good care of her baby…….. Breastfeeding and nutrition for the baby…… Care and danger signs in the newborn…… Care and danger signs in the new mother…….. Family planning…….. Postnatal visits to the health center…… The importance of eating more than usual and/or eating a variety of foods…… Not Applicable……	1 2 3 4 5 6 7 99
5.6	What other services/counseling did you receive during postnatal home visits **for your newborn**? **[Choose all responses given by the woman. Do not read the possible responses.]**	Birth registration…… Newborn physical exam…….. Vaccinating the newborn…….. Other [specify]:_____ Does not know/does not remember Not Applicable……	1 2 3 8 88 99
5.7	What other services did you receive during the postnatal home visit **for you yourself**? **[Choose all responses given by the woman. Do not read the possible responses.]**	Physical examination to detect maternal complications Distribution of Vitamin A Family planning Other [specify]: _____ Does not know/does not remember Not Applicable	1 2 8 88 99
Danger Signs for the Recently-Delivered Woman and Newborn			
5.8	In your opinion, what problems, symptoms or signs would make you think that a newborn is sick and should immediately receive care from a health center? **[Choose all responses given by the woman. Do not read the possible responses.]** Repeat the question adding **What else?**	Newborn does not cry immediately after birth ……. Difficulty breathing, quick breathing…… Newborn is cold…….. Fever…….. Refusal or inability to breastfeed…… Lethargy, very tired, or inactive…… Convulsions …… Pustules or sores on the skin…… Signs of umbilical cord infection…… Other, specify? _____ Does not know/ No response……	1 2 3 4 5 6 7 8 9 88 99
5.9	What danger signs would indicate to you that a recently-delivered woman is sick and should immediately receive care from a health center? **[Choose all responses given by the woman. Do not read the possible responses.]** Repeat the question adding **What else?**	Fever …… Foul-smelling vaginal discharge…… Profuse bleeding …… Vision problems / blurred vision…… Strong stomach ache (pelvic pain)…… Fainting, loss of consciousness…… Convulsions…… Other, specify? _____ Does not know…….. No response ……..	
The woman knows at least 2 danger signs for the newborn (A-H)? **Yes____ No____**			
The woman knows at least 2 danger signs for a recently-delivered woman (A-F)? **Yes____ No____**			

Emergency Management after Birth			
5.10	Did you have a serious problem (or an emergency) at home after the delivery of (NAME), for which you had to seek immediate help?	Yes…… No…….. Not Applicable……...	1 2→**5.17** 99
5.11	What serious problem (emergency situation) did you have?	_____ _____ Not Applicable	 99
5.12	Did you immediately go to a health center?	Yes No Not Applicable	1 2 99
5.13	**[Note: See Q 5.4; if the woman received a post-partum home visit, ask the following questions, otherwise, jump to Q 5.17]** Did the person who assisted you tell you there was a problem related to the <u>postpartum</u> period that required you to visit a health facility?	Yes No Not Applicable	1 2→**5.17** 99
5.14	Did the person who assisted you refer you to the health center because of any problems after birth?	Yes No Not Applicable	1 2→**5.17** 99
Referred to Health Center during post-partum period **Yes____ No____**			
5.15	If yes, were you able to go to a health center within the recommended timeframe?	Yes No Not Applicable	1 2 99
Follow-through with post-partum referral **Yes____ No____**			
5.16	Who made the decision to allow you (or not allow you) to go to the health center?	Herself Husband Head of the household Oldest woman in the household Relative Other (specify): _____ Does not know/ does not remember Not Applicable	1 2 3 4 5 8 9 99
5.17	If you were to give birth again and you experienced a problem, difficulty or complication during **the post-partum period**, would you seek some form of care?	Yes …….. No ……. Does not know	1 2 →**5.19** 9
5.18	Where would you **mainly** go to?	MOH Hospital…… MOH Health Center/Sub-center …… EISS Hospital/Clinic …… Peasant Social Security …… Police or Armed Forces Hospital/Clinic …… Private clinic/doctor …… TBA …… Other, specify? _____ Does not know/ does not remember……..	1 2 3 4 5 6 7 88 99
NEWBORN CARE			
5.19	In your opinion, what is the minimum time period after birth that a woman and her baby should receive postnatal care (at the home or health center)? **[Choose only one response. Do not read the possible responses.]**	1 or 2 days 3-6 days 1 or 2 weeks 3-6 weeks More than 6 weeks Does not know/ No response	1 2 3 4 5 9
5.20	If you became pregnant again, and **your newborn** experiences a problem, discomfort, complication, would you seek some type of care?	Yes …….. No ……. Does not know	1 2 →**5.22** 9

5.21	Where would you **mainly** go to?	MOH Hospital…… MOH Health Center/Sub-center …… EISS Hospital/Clinic …… Peasant Social Security …… Police or Armed Forces Hospital/Clinic …… Private clinic/doctor …… TBA …… Other, specify? _____ Does not know	1 2 3 4 5 6 7 88 99
5.22	What substances did you apply on the baby's umbilical cord after birth? **[Choose only one response. Do not read the possible choices.]**	Traditional remedies (herbal infusions, ointments, plaster) Antiseptics (alcohol, hydrogen peroxide, etc.) Other, specify: _____ Does not know/ does not remember None	1 2 8 9 99
5.23	In your opinion, what must a new mother do to take good care of her baby after birth? **[Choose all responses given by the woman. Do not read the possible responses.]**	Dry the newborn immediately after birth…… Establish skin-to-skin contact with the mother…….. Delayed the baby first bath for at least 6 hours…… Cover the baby's head with a cap or cloth to keep him or her warm…… Initiate breastfeeding within the first hour after birth… Exclusive breastfeeding…….. Do not put anything on the umbilical cord…… Handwashing…… Other, specify: _____ No responses given……	1 2 3 4 5 6 7 8 88 99
Can the mother identify at least 2 newborn care elements (A-H)? **Yes____ No____**			
Breastfeeding/ Infant and Young Child Feeding			
5.24	At what point after the birth of (NAME) did you initiate breastfeeding? **[Choose only one response]**	In the first hour 2-6 hours after birth More than 6 hours after birth Never Does not know/ does not remember	1 2 3 4 9
5.25	At what age did you start to give (NAME) food or liquids other than breastmilk, like water, corn or millet porridge, etc. (NAME)? **[Choose only one response]**	From birth 1 or 2 months 3 -5 months After 6 months Do not know/ does not remember	1 2 3 4 9
5.26	**INTERVIEWER: See Q. 2.11;** if the baby is less than 6 months old. If so ask: During the last 24 hours, has (NAME) been exclusively fed with breast milk? **[If baby is more than 6 months old jump to Q 6.1]**	Yes …… No …….. Not Applicable ……	1 2 99

E. Rapid Catch Indicators

VI. FAMILY PLANNING			
6.1	Are you currently doing something or using any method to delay or avoid getting pregnant?	Yes …… No ……..	1 2 →**6.3**

6.2	Which method are you (or your husband/ partner) using? **[Do not read responses. Code only one response. if more than one method is mentioned, ask:]** Which is the MAIN method that you (or your husband/ partner) use to delay or avoid getting pregnant?" **[If respondent mentions both condoms and standard days method, code "12" for standard days method].**	Female Sterilization Male Sterilization Pill IUD Injectables Implants Condom Female Condom Diaphragm Foam/Jelly Lactational Amen. Method Standard Days Method/ Cycylebeads Rhythm Method (Other than Standard Days) Withdrawal Abstinence Other (Specify): _____	1 2 3 4 5 6 7 8 9 10 11 12 13 14 88
	Uses a modern contraceptive method? **Yes____ No____**		
6.3	In your opinion, how long should a woman wait between births?	Less than 2 years 2-4 years 5 years or more The time she wishes Does not know/does not respond	1 2 3 4 9

Breastfeeding/ Infant and Young Child Feeding

6.4	Now I would like to ask you about liquids or foods (NAME) had yesterday during the day or at night. Did (NAME) drink/eat: **[Read the list of liquids: A through E, starting with "Breast Milk"]**		**YES**	**NO**	**DK**	
	A. Breast milk?		1	2	9	
	B. Plain water?		1	2	9	
	C. Commercially produced infant formula?		1	2	9	
	D. Any fortified, commercially available infant and young child food" [e.g. Cerelac]?		1	2	9	
	E. Any (other) porridge or gruel?		1	2	9	
6.5	Now I would like to ask you about **(other)** liquids or foods that (NAME) may have had yesterday during the day or at night. I am interested in whether your child had the item even if it was combined with other foods. Did (NAME) drink/eat:					
	GROUP 1:DAIRY		**YES**	**NO**	**DK**	
	CHECK Q.6.4C – IF YES, CIRCLE YES HERE A. Commercially produced infant formula?		1	2	9	
	B. Milk such as tinned, powdered, or fresh animal milk?		1	2	9	
	C. Cheese, yogurt, or other milk products?		1	2	9	
6.6	**GROUP 2: GRAIN**		**YES**	**NO**	**DK**	
	CHECK Q. 6.4 D – IF YES, CIRCLE YES HERE D. Any fortified, commercially available infant and young Child food (e.g. Cerelac)?		1	2	9	
	CHECK Q. 6.4 E – IF YES, CIRCLE YES HERE E. Any (other) porridge or gruel?		1	2	9	
	F. Bread, rice, noodles, or other foods made from		1	2	9	

	grains?		
	G. White potatoes, white yams, manioc, cassava, or any other foods made from roots?	1 2 9	
6.7	**GROUP 3: VITAMIN A RICH VEGETABLES**	**YES NO DK**	
	H. Pumpkin, carrots, squash, or sweet potatoes that are yellow or orange inside?	1 2 9	
	I. Any dark green leafy vegetables?	1 2 9	
	J. Ripe mangoes, papayas or (INSERT ANY OTHER LOCALLY AVAILABLE VITAMIN A-RICH FRUITS)?	1 2 9	
	K. Foods made with red palm oil, palm nut, palm nut pulp sauce?	1 2 9	
6.8	**GROUP 4: OTHER FRUITS/VEGETABLES**	**YES NO DK**	
	L. Any other fruits or vegetables like oranges, grapefruit or pineapple?	1 2 9	
6.9	**GROUP 5: EGGS**	**YES NO DK**	
	M. Eggs?	1 2 9	
6.10	**GROUP 6: MEAT, POULTRY, FISH**	**YES NO DK**	
	N. Liver, kidney, heart or other organ meats?	1 2 9	
	O. Any meat, such as beef, pork, lamb, goat, chicken, or duck?	1 2 9	
	P. Fresh or dried fish or shellfish?	1 2 9	
	Q. Grubs, snails, insects, other small protein food?	1 2 9	
6.11	**GROUP 7: LEGUMES/NUTS**	**YES NO DK**	
	R. Any foods made from beans, peas, lentils, or nuts?	1 2 9	
6.12	**GROUP 8: OILS/FATS**	**YES NO DK**	
	S. Any oils, fats, or butter, or foods made with any of these?	1 2 9	
	T. **CHECK HOW MANY FOOD GROUPS (GROUPS 1-8 IN ABOVE TABLE) HAVE AT LEAST 1 'YES' CIRCLED?**	**Number of Groups** ☐	
6.13	**GROUP 9: OTHER FOODS**	**YES NO DK**	
	U. Tea or coffee?	1 2 9	
	V. Any other liquids?	1 2 9	
	W. Any sugary foods, such as chocolates, candy, sweets, pastries, cakes, or biscuits?	1 2 9	
	X. Any other solid or soft food?	1 2 9	
	How many times did (NAME) eat solid, semi-solid, or soft foods other than liquids yesterday during the day or at night? **INTERVIEWER: If caregiver answers seven or more times, record "7". Small snacks and small feeds such as one or two bites of mother's or sister's food should not be counted. Liquids do not count for this question. Do not include thin soups or broth, watery gruels, or any other liquid.Use probing questions to help the respondent remember all the times the child ate yesterday**	NUMBER OF TIMES ☐ DON'T KNOW…… …….9	

Vitamin A Supplementation			
6.14	Has (Name) ever received a Vitamin A dose (like this/any of these)?	Yes No Does not know	1 2→**6.16** 99→**6.16**
6.15	Did (Name) receive a Vitamin A dose within the last 6 months?	Yes No Does not know	1 2 99
Child Immunizations			
6.16	Do you have a card or child health booklet where (Name's) vaccinations and Vitamin A (capsules) are written down? **IF YES: May I see it please?**	Yes No	1 2→**6.19**
6.17	**Copy vaccination dates for vitamin a, first and third DPT dose (DTP1-DPT3), and measles, from the card or booklet.** **If vaccines are not recorded in child health card or booklet, fill in 99/99/9999.**	**DAY MONTH YEAR** VITAMIN A..|___|___|/|___|___|/|___|___|___|___| DTP1……|___|___|/|___|___|/|___|___|___|___| DTP3……|___|___|/|___|___|/|___|___|___|___| MEASLES...|___|___|/|___|___|/|___|___|___|___|	
6.18	Has (NAME) received any vaccinations that are not recorded on this card, including vaccinations given during immunization campaigns?	Yes No Does not know	1→ **6.22** 2→ **6.22** 9→ **6.22**
6.19	**If the mother does not have a booklet**, ask: Has (NAME) received a DTP vaccination, that is, an injection given in the thigh, sometimes at the same time as polio drops?	Yes No Does not know	1 2→ **6.22** 9→ **6.22**
6.20	How many times?	NUMBER OF TIMES..... ☐	
6.21	Did (Name) ever receive an injection in the arm to prevent Measles?	Yes No Does not know	1 2 9
Control of Diarrhea			
6.22	Has (Name) had diarrhea in the last 15 days, including today?	Yes No	1 2→ **6.24**
6.23	Was s/he given any of the following to drink at any time since s/he started having diarrhea: **[Read choices aloud]**	**YES NO DK**	
	a) A fluid made from a special packet called (local name for ORS packet)?	1 2 9	
	b) A pre-packaged ORS liquid?	1 2 9	
	c) A government-recommended homemade fluid?	1 2 9	
ARI/Pneumonia			
6.24	Has (Name) had an illness with a cough that comes from the chest at any time in the last two weeks?	Yes No	1 2→ **6.28**
6.25	When (Name) had an illness with a cough, did he/she have trouble breathing or breathe faster than usual with short, fast breaths?	Yes No Does not know	1 2

6.26	Did you seek advice or treatment for the cough/fast breathing?	Yes No	1 2→ **6.28**
6.27	Who gave you advice or treatment? Anyone else? **RECORD ALL MENTIONED**.	Doctor……..…… Nurse……..... Auxiliary nurse……. Trained community health worker…… Other……..…	1 2 3 4 8
Water and Sanitation			
6.28	Do you treat your water in any way to make it safe for drinking?	Yes No	1 2→ **6.30**
6.29	If yes, what do you usually do to the water to make it safer to drink? **[Only check more than one response if several methods are usually used together, for example, cloth filtration and chlorine.]**	Let it stand and settle/sedimentation…… Strain it through cloth…….. Boil…… Add bleach/chlorine…… Water filter (ceramic, sand, composite)…… Solar disinfection…….……. Other..... Don't know…….……..	1 2 3 4 5 6 8 9
6.30	***ASK TO SEE AND OBSERVE*** *Can you show me where you usually wash your hands and what you use to wash hands?*	Inside / near toilet facility.. ..... …… Inside / near kitchen/cooking place ..... …….. Elsewhere in yard..... …….. No specific place ..... …… No permission to see..... ……	1 2 3 4 6 →**END**
6.31	**Observation only: Is there soap or detergent or locally used cleansing agent?** This item should be either in place or brought by the interviewee within one minute. If the item is not present within one minute check none, even if brought out later.	Soap..... …… Detergent..... …… Ash ..... …… Mud/sand..... …… None..... …… Other ..... ……	1 2 3 4 5 8

THANK YOU VERY MUCH FOR YOUR HELPFUL PARTICIPATION!

Name of the interviewer: _____

Name and supervisor's signature after verifying survey was completed:

_____

Formulario de Consentimiento Informado

Organización: Center for Human Services (CHS)
Organización Auspiciante: USAID
Proyecto: Proyecto de Cuidado Obstétrico y Neonatal Esencial (CONE), Cotopaxi, Ecuador
Tema de la Investigación Operativa: Hacia la Comprensión de las Barreras, Oportunidades y Resultados del Cuidado Domiciliario Temprano Post-Parto a cargo de Agentes Tradicionales de Atención del Parto (parteras)

Propósito: Esta investigación examinará las barreras y oportunidades para la introducción de la atención oportuna del post-parto, incluyendo mejoras en la búsqueda de atención y el acatamiento de referencias en caso de complicaciones.

Procedimientos: La entrevista se realizará en un lugar conveniente para Ud. Se espera que la entrevista dure entre 30 minutos y una hora. Ud. será entrevistada por una persona entrenada para recolectar información.

Riesgos e incomodidad previsibles: Este estudio conlleva riesgos mínimos. Ud. puede sentirse incomoda al compartir sus opiniones o comentar sobre su rol, o los roles de otros miembros de la comunidad. A fin de minimizar los riesgos, Ud. será entrevistada por un encuestador de su mismo sexo en un lugar privado. No utilizaremos su nombre al discutir los hallazgos de la investigación.

Confidencialidad: Toda la información recolectada como parte de este estudio será confidencial. A fin de proteger su privacidad, ningún instrumento de recolección de datos, ni anotaciones realizadas, incluirán su nombre.

Participación Voluntaria: Ud. puede elegir no participar en esta evaluación si no desea hacerlo. También puede elegir el dejar de participar en cualquier momento durante la entrevista sin que esto tenga consecuencias negativas. Su participación es completamente voluntaria.

Beneficios de la Investigación: La información de este estudio se utilizará para mejorar la atención domiciliaria post-parto, el apoyo y funcionalidad de los agentes tradicionales de salud (parteras), los vínculos con el sistema de salud, y la prestación de servicios de salud en las comunidades a nivel local.

A quién Contactar: Si tiene preguntas puede realizarlas ahora o posteriormente, incluso después de que la investigación haya iniciado. Si desea hacer preguntas posteriormente, puede contactar a Mario Chávez, Co-Investigador (contacto a nivel local), por teléfono al (222-22-119) o por correo electrónico a mchavez@ecnet.ec

¿Tiene Ud. preguntas?

_____ _____
(Firma del Encuestador) (Fecha)

Nota: La firma indica que el encuestador ha leído este documento e informado a la potencial entrevistada.

¿Está Ud. de acuerdo con participar en este estudio? Sí ☐ 1 No ☐ 0

_____ _____
(Firma de la Encuestada) (Fecha)

Nota: Se requiere una firma si la potencial entrevistada sabe leer y escribir y/o puede firmar. Si la persona no sabe leer y escribir, por favor escriba N/A. En ese caso, la firma del entrevistador es suficiente.

ENCUESTA DE CONOCIMIENTOS, ACTITUDES Y PRÁCTICAS (CAP) SOBRE SALUD MATERNA Y NEONATAL 2010

A fin de ser elegible para esta encuesta, la mujer debe tener al menos un niño de 0-23 meses de edad

Pregunte a la madre si tiene niños o niñas menores de 24 meses de edad que vivan con ella. Si contesta afirmativamente, proceda con la encuesta, de lo contrario agradezca y finalice la entrevista.

Nº de cuestionario: /_____/_____/_____/

VII. IDENTIFICACIÓN GEOGRÁFICA Y MUESTRAL
1.1 PROVINCIA: _____ /_____/_____/ 1.**2** CANTÓN: _____ /____/____/____/____/
1.3 CIUDAD O PARROQUIA RURAL: _____ /____/____/____/____/____/____/
1.4 COMUNIDAD, BARRIO: _____
1.5 ZONA Nº: /_____/_____/_____/ 1.**6** SECTOR Nº: /_____/_____/ 1.**7** MANZANA Nº: /_____/_____/
1.8 DIRECCIÓN (Calle, camino carretero) _____

RESULTADO DE LA ENTREVISTA			
No. de visitas	**1**	**2**	**3**
Fecha de visitas	Día _____ Mes _____	Día _____ Mes _____	Día _____ Mes _____
Hora de inicio de la entrevista	Hora _____ Min. _____	Hora _____ Min. _____	Hora _____ Min. _____
Hora de finalización de la entrevista	Hora _____ Min. _____	Hora _____ Min. _____	Hora _____ Min. _____
Resultado (*)	_____	_____	_____
(*) Código de Resultado: Completa …… …….. …….. 1 Encuestada no está en casa…… 2 Pospuesta …… 3 Rechazo …… 4 Otro (especifique) _____ …. 5	Nombre Entrevistador(a): _____ Nombre Supervisor(a): _____		

PROCESAMIENTO	**Código**	**Fecha**
Codificado:	/_____/	_____
Digitado:	/_____/	_____

A. CARACTERÍSTICAS SOCIO-DEMOGRÁFICAS

II. CARACTERÍSTICAS SOCIO-DEMOGRÁFICAS DE LA MADRE Y NIÑO(A) MENOR DE 24 MESES DE EDAD			
2.1	¿Cuál es su edad en años cumplidos?	/_____/_____/ Años	
2.2	¿Cuál es el nivel de estudios más alto aprobado por usted? ***[Nota: Registre solo una opción de respuesta]***	No tengo estudios ..... . Primaria incompleta..... . Primaria completa ..... . Secundaria incompleta..... . Secundaria completa..... . Estudios técnicos ..... . Estudios superiores..... . Otra, cuál?_____ ……...	0 1 2 3 4 5 6 8
2.3	Cómo se identifica usted: ***[Nota: Lea en voz alta todas las opciones. Registre solo una opción de respuesta]***	Negra? …….. Mulata? …… Blanca? …… Mestiza? …… Indígena? …….. Otra, cuál? _____ ……	1 2 3 4 5 88
2.4	¿En qué trabaja o a qué se dedica <u>principalmente</u> usted?	Ama de casa ..... Agricultora por cuenta propia ..... Empleada doméstica..... Empleada o trabajadora en sector público …… Comerciante …….. Obrera/jornalera ..... Empleada privada ..... Estudiante ..... Otra, cuál? _____ …… No responde.....	1 2 3 4 5 6 7 8 88 99
2.5	¿Cuál es su estado civil o conyugal actual?	Soltera..... Casada..... Divorciada ..... Separada..... Viuda ..... Unión libre ..... No responde.....	1 2 3 4 5 6 99
2.6	¿Cuántos hijos(as) **<u>nacidos vivos</u>** ha tenido usted durante toda su vida?	/_____/_____/ No responde ……	 99
2.7	¿Cuántos hijos(as) actualmente vivos tiene, aunque no vivan con usted?	/_____/_____/ No responde ……	 99
2.8	¿Cuál es el nombre de su hijo más pequeño o de menor edad?	_____	
2.9	Sexo del niño(a):	Hombre …… Mujer ……	1 2
2.10	En qué fecha nació (NOMBRE)?	Día: /_____/_____/ Mes: /_____/_____/ Año: /_____/_____/_____/_____/	
2.11	***ENTREVISTADOR(A):*** *calcule los meses de edad que tiene (NOMBRE). Si tiene menos de un mes, ponga "00"*	/_____/_____/ Meses	

A. PRÁCTICAS Y ATENCIÓN DURANTE EL EMBARAZO

III. PRÁCTICAS Y ATENCIÓN DURANTE EL EMBARAZO			
3.1	¿Tuvo algún control prenatal cuando estuvo embarazada de (NOMBRE)?	Sí …… No ……..	1 2→**3.21**
3.2	¿Cuando estaba embarazada de (NOMBRE), cuántos meses de embarazo tenía cuando le hicieron el primer control?	/_____/ Meses	

3.3	¿Dónde recibió control prenatal? [**Nota: Registre todas las respuestas proporcionadas por la mujer. No lea la lista de posibles respuestas.** ***Los saltos deben realizarse solo en caso de tener respuesta única en las opciones 2 o 3***]	En casa (de ella)…… En la comunidad…… En una Unidad de Salud…… No Aplica ……	1 2→**3.6** 3→**3.15** 9
Uso de Servicios Prenatales en el Hogar o la Comunidad			
3.4	**Si fue en el hogar**, ¿de quién recibió control prenatal? ***[Nota: Registre todas las respuestas dadas por la señora.]***	Trabajador Comunitario de Salud…… Partera Tradicional…… …… Personal de salud calificado (doctor, enfermera, obstetriz)..... …….. Otro (Especifique):_____ No Aplica ……	1 2 3 4 99
3.5	¿Cuántas veces recibió control prenatal **en su hogar** durante su último embarazo?	/_____/_____/ Nº de controles No Aplica…… ……	 99
3.6	***Entrevistador(a), revise la pregunta 3.3. Si la señora recibió control prenatal en la Comunidad, haga las siguientes preguntas; caso contrario, pase a 3.8:*** Si fue en la comunidad, ¿de quién recibió control prenatal? ***[Nota: Registre todas las respuestas.]***	Trabajador Comunitario de Salud …… Partera Tradicional…… …… Personal de salud calificado (doctor, enfermera, obstetriz)..... …….. Otro (Especifique):_____ No Aplica ……	1 2 3 4 99
3.7	¿Cuántas veces recibió control prenatal durante su último embarazo en la comunidad?	/_____/_____/ Nº de controles No Aplica…… ……	 99
¿Recibió la mujer al menos 4 visitas prenatales en su hogar y/o en la comunidad? Sí___ No___			
Contenido de los Servicios Prenatales en el Hogar o la Comunidad			
3.8	Durante el control prenatal dado **en el hogar (o en la comunidad)** por *["nombre de la persona que le atendió"]*, ¿Recibió consejería sobre cómo prepararse para el parto?	SÍ …… No …… No sabe / no recuerda…… No Aplica……	1 2 9 99
3.9	Durante el control prenatal realizado **en el hogar (o en la comunidad)**, ¿Recibió consejería sobre señales de peligro que pueden indicar que una mujer embarazada está con complicaciones y necesita consultar a un trabajador de la salud?	SÍ …… No …… No sabe / no recuerda…… No Aplica……	1 2 9 99
3.10	¿Qué otros servicios/atención recibió de *["nombre de la persona que le atendió"]*?: ***[Nota: NO lea la lista de posibles respuestas. Registre todas las respuestas proporcionadas por la mujer.]***	Recibió ácido fólico…… Recibió Hierro…… Recibió la vacuna antitetánica…… Recibió consejería sobre la importancia de comer más / comer variedad de alimentos…… Examen físico para identificar complicaciones maternas durante el embarazo…… Recibió consejería sobre señales de peligro..... Recibió consejería sobre preparación del parto..... Recibió consejería sobre cuidados del recién nacido Recibió información sobre planificación familiar…. Otro (Especifique): _____ No Aplica…… ……	1 2 3 4 5 6 7 8 9 88 99
3.11	["*nombre de la persona que le atendió*"] ¿Le dijo que Ud. tenía un problema relacionado a su embarazo y que era necesario acudir a un establecimiento de salud para recibir atención especial?	SÍ …… No …… No sabe / no recuerda…… No Aplica……	1 2→**3.15** 9→**3.15** 99
3.12	Si fue así, ***["nombre de la persona que le atendió"]*** ¿Le sugirió que vaya a un establecimiento de salud por problemas relacionados a su embarazo?	SÍ …… No …… No sabe / no recuerda…… No Aplica……	1 2→**3.15** 3→**3.15** 99
3.13	¿Pudo ir al establecimiento de salud dentro del lapso de tiempo recomendado por ***["nombre de la***	SÍ …… No ……	1 2

	persona que le atendió"]?	No sabe / no recuerda…… No Aplica.....……	9 99
3.14	¿Quién fue la principal persona que tomó la decisión de permitir que Ud. acuda al establecimiento de salud? ***[Nota: Registre sólo una respuesta.]***	Ella misma…… Esposo/Pareja/Compañero…… Jefe/Jefa de hogar..... …… La mujer de más edad en el hogar…… Ella y su esposo/compañero…….. Otro (Especifique): _____ No sabe / no recuerda…… No Aplica.....……	1 2 3 4 5 8 99 99
Atención Prenatal en el Centro de Salud			
3.15	¿Conoce Ud. Si hay alguna unidad de salud que ofrezca atención a mujeres embarazadas, madres y recién nacidos en esta parroquia o cantón?	SÍ …….. No …… No sabe / no recuerda……	1 2 99
3.16	***<u>Entrevistador(a),</u> revise la pregunta 3.3.*** ***Si la señora recibió atención prenatal en un Establecimiento de Salud, haga las siguientes preguntas; caso contrario, pase a 3.21:*** Si Ud. se hizo controles del embarazo en un Establecimiento de Salud cuando estaba embarazada de (NOMBRE), ¿A qué Establecimiento de Salud fue **<u>con mayor frecuencia</u>?**	Hospital/Maternidad del MSP …… Centro de Salud/Subcentro del MSP …… Hospital/Dispensario del IESS …….. Seguro Social Campesino …… Hospital/Dispensario de FF.AA. ó Policía …… Clínica/Médico privado …… Consultorio de empresa donde trabaja …… Otro, cuál? _____ …. No sabe/no responde ……..	1 2 3 4 5 6 7 88 99
3.17	¿Quién le realizó más controles cuando estuvo embarazada de (NOMBRE)?	Médico(a) …… Obstetriz …… Enfermera …… Auxiliar de enfermería …… Partera o comadrona …….. Otra, cuál? _____ …… No sabe/no recuerda ……..	1 2 3 4 5 8 9
3.18	¿Cuántos controles del embarazo se hizo en un Establecimiento de Salud durante el embarazo de (NOMBRE)?	/_____/_____/ Nº de controles No Aplica ……	 99
3.19	En ese establecimiento de salud, durante el control prenatal, ¿Recibió algún tipo de consejería sobre <u>cómo identificar señales de peligro</u> para usted o para (NOMBRE) que iba a nacer?	SÍ …….. No …… No sabe / no recuerda……	1 2 9
3.20	En ese establecimiento de salud, durante el control prenatal, ¿Recibió algún tipo de consejería sobre <u>cómo prepararse para el parto y nacimiento</u> de (NOMBRE)?	SÍ …….. No …… No sabe / no recuerda……	1 2 9
¿Hizo la mujer al menos 4 visitas prenatales al Establecimiento de Salud durante su último embarazo? **Sí___ No___**			
¿Tuvo la mujer al menos 4 visitas prenatales combinadas entre la comunidad y el Establecimiento de Salud durante su último embarazo? **Sí___ No___**			
Vacunación contra el tétanos durante el embarazo			
3.21	Durante su embarazo de (NOMBRE), ¿Recibió una inyección en el brazo para evitar que el bebé contraiga tétanos (*convulsiones*), después del parto?	SÍ …….. No …… No sabe / no recuerda……	1 2 9 } **3.23**
3.22	Cuando estuvo embarazada de (NOMBRE), ¿Cuántas veces recibió ésta inyección?	/_____/ Nº de veces	
3.23	¿Recibió una inyección contra el tétanos en cualquier momento antes del embarazo de (NOMBRE)?	SÍ …….. No …… No sabe / no recuerda……	1 2 9 } **3.25**

3.24	Antes del embarazo de (NOMBRE), ¿Cuántas veces recibió una inyección contra el tétanos?	/_____/ Nº de veces	
Recibió al menos 2 inyecciones de Toxoide Tetánico antes del nacimiento de su hijo menor: Sí___ No___			
Preparación para el parto			
3.25	¿Qué preparativos realizaron Ud. y su familia antes del nacimiento de (NOMBRE)? **[Registre todas las respuestas dadas por la mujer. No lea las respuestas posibles.]**	Identificar el establecimiento de salud donde acudiría para dar a luz..... 1 Identificar un proveedor calificado o partera para atender el parto..... 2 Identificar un lugar donde ir en caso de emergencia… 3 Tener dinero ahorrado..... 4 Preparar una maleta para el parto (ropa, jabón, ropa de bebé, etc.)..... 5 Identificar un medio de transporte para salir rápido en caso de emergencia..... 6 Identificar un donante de sangre..... 7 Planificar el apoyo de miembros de la familia (ayudantes, cuidadores de niños, etc.)..... 8 Preparar documentos (cedula, carné en caso de tener seguro, etc.)..... 9 Otro:_____ 88 No hicieron preparativos..... 99	
¿La mujer implementó al menos 2 elementos de la preparación para el parto? Sí___ No___			
3.26	¿Qué cree Ud. qué debe hacer una mujer embarazada y su familia para prepararse adecuadamente para el parto? ***[Registre todas las respuestas dadas por la encuestada. No lea la lista de posibles respuestas.]***	Identificar el establecimiento de salud donde acudiría para dar a luz..... 1 Identificar un proveedor calificado o partera para atender el parto..... 2 Identificar un lugar donde ir en caso de emergencia… 3 Tener dinero ahorrado..... 4 Preparar una maleta para el parto (ropa, jabón, ropa de bebé, etc.)..... 5 Identificar un medio de transporte para salir rápido en caso de emergencia..... 6 Identificar un donante de sangre..... 7 Planificar el apoyo de miembros de la familia (ayudantes, cuidadores, de niños, etc.)..... 8 Preparar documentos (cedula, carnet en caso de tener seguro, etc.)..... 9 Otro:_____ 88 No se hicieron preparativos..... 99	
¿La mujer conoce al menos 2 elementos de la preparación para el parto? Sí___ No___			
Señales de peligro para mujeres embarazadas			
3.27 (I10)	**<u>Durante el embarazo</u>**, una mujer puede presentar problemas o enfermedades graves y debería ir, inmediatamente a un establecimiento de salud. ¿Qué señales de peligro harían que Ud. busque atención inmediata en un establecimiento de salud? ***(MARQUE TODAS LAS RESPUESTAS ESPONTÁNEAS QUE COINCIDAN CON LAS ALTERNATIVAS)****. Repita la pregunta añadiendo* ***¿Y qué más?***	Dolor fuerte del abdomen …… 1 Dificultad para respirar…….. 2 Sangrado vaginal …….. 3 Calentura o fiebre …… 4 Salida del agua de fuente …… 5 Hinchazón de pies, manos o cara …… 6 No se mueve el niño/a …… 7 Desmayo, pérdida de conciencia …….. 8 Dolor de cabeza/visión borrosa..…… 9 Convulsiones..... 10 Secreción vaginal de mal olor……. 11 Otro, cuál? _____ …… 88 No sabe / No responde …….. 99	

¿La mujer conoce al menos 2 signos de peligro para una mujer embarazada? Sí___ No___			
3.28	Si quedara usted nuevamente embarazada y si tuviera algún problema, malestar o complicación **durante el embarazo**, ¿Buscaría algún tipo de atención?	SÍ …….. No ……. No sabe	1 2→**4.1** 9→**4.1**

3.29	¿A dónde acudiría **principalmente**?	Hospital/Maternidad del MSP …… Centro de Salud/Subcentro del MSP …… Hospital/Dispensario del IESS …….. Seguro Social Campesino …… Hospital/Dispensario de FF.AA. ó Policía …… Clínica/Médico privado …… Consultorio de empresa donde trabaja …… Partera …….. Otro, cuál? _____ …. No sabe/no responde ……..	1 2 3 4 5 6 7 8 88 99

B. ATENCIÓN DURANTE LA LABOR DE PARTO Y NACIMIENTO

IV. Señales de peligro durante el parto			
4.1	Durante la labor y el parto, ¿Qué molestias, síntomas o señales cree usted que indican que hay peligro para la madre o para el bebé y que alertan a la mujer para que busque atención inmediata de un proveedor de salud calificado? ***(MARQUE TODAS LAS RESPUESTAS ESPONTÁNEAS QUE COINCIDAN CON LAS ALTERNATIVAS)****. Repita la pregunta añadiendo* ***¿Y qué más?***	El bebé está en una posición incorrecta..... Movimiento fetal mínimo o inexistente..... Labor de parto prolongada..... Fiebre …… Dolor de cabeza / Visión borrosa..... Convulsiones …… Dificultad para respirar..... Placenta está retenida …… Pérdida de conciencia / desmayo …… Hemorragia/ sangrado abundante o fuerte …..... Otro, Especifique _____ No sabe/no responde ……..	1 2 3 4 5 6 7 8 9 10 88 99

¿La mujer conoce al menos 2 signos de peligro durante el parto? Sí___ No___			
Atención , lugar del parto y prácticas Inmediatas post-parto			
4.2	¿Dónde dio a luz a (NOMBRE)? ***[Nota: Escoja solo una respuesta]***	Hospital/Maternidad del MSP …… Centro de Salud/Subcentro del MSP …… Hospital/Dispensario del IESS …….. Seguro Social Campesino …… Hospital/Dispensario de FF.AA. ó Policía …… Clínica/Médico privado …… En casa con partera..... En casa con algún familiar..... En casa, sola..... Otro, cuál? _____ …. No sabe/no responde ……..	1 2 3 4 5 6 7 8 9 88 99
4.3	¿Quién le atendió durante el parto de (NOMBRE)? ***[Registre sólo una respuesta. Si la mujer menciona más de un proveedor, seleccione al más calificado.]***	Médico(a) …… Obstetriz …… Enfermera …… Partera o comadrona..... Familiar…… Dio a luz sola…… Otro, cuál? _____ …… No sabe/no recuerda ……..	1 2 3 4 5 6 8 9

¿La mujer fue atendida por un proveedor de salud calificado durante su último parto? **Sí___ No___**			
4.4	***Entrevistador(a): Vea P 4.2, si la mujer dio a luz en un establecimiento de salud, realice la siguiente pregunta, caso contrario pase a la pregunta 4.5*** ¿Recomendaría Ud. a un familiar o amiga el establecimiento de salud donde dio a luz a (NOMBRE)?	Sí …….. No …… No sabe .....…… No Aplica.....……	1 2 9 99 } **4.10**
4.5	***Entrevistador(a): Vea P 4.2, si la mujer NO dio a luz en un establecimiento de salud, pregunte:*** ¿Cuál es la principal razón por la cual Ud. no dio a luz a (NOMBRE) en un establecimiento de salud?	Barreras geográficas (distancia, malo el camino, etc).. No tuvo tiempo para llegar allí..... Esposo/pareja se opuso..... Familiares se opusieron..... No tuvo dinero para pagar..... La atención del establecimiento de salud es mala..... El parto en casa es costumbre o tradición..... Otro, cuál? _____ …….. No sabe/no recuerda …….... No Aplica …….....	1 2 3 4 5 6 8 9 88 99
4.6	¿Se colocó algo en el cordón umbilical, ya sea antes o después de que fuera cortado?	Sí..... No..... No sabe/ no recuerda.....	1 2→**4.8** 9→**4.8**
4.7	¿Qué se colocó principalmente en el cordón umbilical?	Remedios tradicionales (infusiones de hierbas, ungüentos, emplasto)..... Antisépticos (alcohol, agua oxigenada, etc.)..... Otro, cuál: _____ No sabe/ no recuerda..... No Aplica.....	1 2 8 88 99
4.8	¿Fue (NOMBRE) secado (limpiado) inmediatamente después del parto, antes de que la placenta fuera expulsada?	Sí..... No..... No sabe/ no recuerda.....	1 2 9
4.9	¿Fue (NOMBRE) envuelto en un paño o manta abrigada inmediatamente después del parto, antes de que la placenta fuera expulsada?	Sí..... No..... No sabe/ no recuerda.....	1 2 9
4.10	¿Cuánto tiempo después del parto dio el seno a (NOMBRE) por primera vez?	Inmediatamente …….. Horas: _____ Días: _____ Otro, Especifique: _____ … No recuerda ……	87 88 99
El bebé fue amamantado dentro de una hora después del parto **Sí____ No____**			
¿Se proporcionaron Cuidados Esenciales del Recién Nacido? (secado/abrigo; cuidados del cordón; lactancia materna al cabo de una hora) **Sí____ No____**			
Manejo de emergencias obstétricas durante partos domiciliarios			
4.11	***Entrevistador(a): Vea P 4.2, si la mujer dio a luz en su casa, realice la siguiente pregunta, caso contrario pase a la P.4.19 :*** ¿Tuvo algún problema serio (que afectó a Ud. o al recién nacido) durante el parto de (NOMBRE) por el cual tuvo que buscar ayuda inmediata?	Sí..... No..... No sabe/ no recuerda..... No Aplica.....	1 2→**4.19** 9→**4.19** 99
4.12	¿Qué problema serio o situación de emergencia tuvo (Ud. o su bebé)?	_____ No Aplica	99

4.13	¿Le dijo ["nombre de la persona que le atendió"] que Ud. tenía un problema relacionado al parto por el cual debería acudir a un establecimiento de salud?	Sí..... No..... No sabe/ no recuerda..... No Aplica.....	1 2 9 99
4.14	Durante su parto en casa, ["nombre de la persona que le atendió"], ¿Le dijo que vaya a un establecimiento de salud por un problema relacionado al parto?	Sí..... No..... No sabe/ no recuerda..... No Aplica.....	1 2 9 99
	Referencia al establecimiento de Salud durante el parto, por partera, promotor comunitario, o personal de salud: Sí____ No____		
4.15	¿Fue al establecimiento de salud para recibir atención por este problema?	Sí..... No..... No Aplica.....	1 2→**4.19** 99
	Acatamiento de la referencia: Sí____ No____		
4.16	Si fue así, qué cosa ayudó para llegar hasta el establecimiento de salud? ***[Registre todas las respuestas dadas por la encuestada. No lea las posibles respuestas.]***	Tuvo acceso inmediato al transporte (vehículo y combustible) ..... Coordinación por parte del "esposo u otro miembro de la familia" que facilite la salida..... Método de comunicación con el sistema de salud.... Disponibilidad de un/a "dirigente" seleccionado que facilite la salida al establecimiento de salud..... Disponibilidad de un "promotor de salud comunitario" que facilite la salida ..... Acceso inmediato a forma de pago..... Acceso inmediato a un proveedor calificado..... Acompañamiento de un trabajador de salud comunitario..... Otro, [especifique]: _____ No responde.....	1 2 3 4 5 6 7 8 88 99
4.17	Finalmente, ¿Pudo Ud. llegar al establecimiento de salud?	Sí..... No..... No Aplica.....	1 2 9
4.18	¿Quién tomó la decisión de permitir (o no permitir) que Ud. acuda al establecimiento de salud? ***[Registre una sola respuesta.]***	Ella misma…… Esposo/compañero…… Ella y su esposo/compañero…… Jefe(a) de hogar..... …… La mujer de más edad en el hogar…… Otro (Especifique): _____ No sabe / no recuerda…… No Aplica.....	1 2 3 4 5 8 9 99
4.19	Si quedara usted nuevamente embarazada y si tuviera algún problema, malestar o complicación **durante el parto**, ¿Buscaría algún tipo de atención?	SÍ …….. No …….. No sabe	1 2→ **5.1** 9→ **5.1**
4.20	¿A dónde **principalmente** acudiría?	Hospital/Maternidad del MSP …… Centro de Salud/Subcentro del MSP …… Hospital/Dispensario del IESS …….. Seguro Social Campesino …… Hospital/Dispensario de FF.AA. ó Policía …… Clínica/Médico privado …… Consultorio de empresa donde trabaja …… Partera …….. Otro, cuál? _____ …. No sabe/no responde ……..	1 2 3 4 5 6 7 8 88 99

C. ATENCIÓN POST-PARTO

	V. Uso de servicios de atención post-parto		
5.1	***[Encuestador: Vea la P. 4.2. Si la mujer dio a luz en un establecimiento de salud, realice la siguiente***	Sí..... No.....	1 2

	pregunta, caso contrario pase a la P 5.2:] ¿Después de dar a luz a (NOMBRE) en el establecimiento de salud, permaneció allí por lo menos 2 días?	No Aplica.....	99
5.2	Recibió atención o consejería post-parto por parte de un proveedor de salud **durante los 2 días posteriores al parto** de (NOMBRE)?	Sí..... No..... No Aplica.....	1→ **5.4** 2 99
5.3	¿Recibió atención o consejería para el post-parto **durante la primera semana** después del nacimiento de (NOMBRE), ya sea en casa, comunidad, o en el establecimiento de salud?	Sí..... No..... No Aplica.....	1 2 →**5.8** 99
5.4	Si fue así, ¿Dónde recibió atención/consejería post-parto? ***[Registre todas las respuestas dadas por la encuestada. No lea las posibles respuestas.]***	Visita domiciliaria de partera tradicional..... Visita domiciliaria de Trabajador Comunitario de Salud Visita domiciliaria de personal de salud calificado..... Centro de Salud/Hospital..... Clínica Privada…….. No Aplica……	1 2 3 4→**5.8** 5→**5.8** 99
Recibió atención post-parto dentro de 2 días después del parto: Sí____ No____			
Contenido/Calidad de las visitas domiciliarias post-parto			
5.5	Durante la visita domiciliaria post-parto, recibió consejería sobre los siguientes temas: ***(Lea cada una de las alternativas y marque el código de cada una si dice que si)*** ***[Nota: Asegúrese de que la mujer entiende bien lo que Ud. preguntó.]***	Lo que debe hacer una madre para dar un buen cuidado a su bebé? …….. Lactancia materna y nutrición del bebé? …… Cuidados y señales de peligro en el recién nacido? … Cuidados y señales de peligro en la madre?..... Planificación Familiar?…… Visitas postnatales al centro de salud? …….. La importancia de comer más y/o comer variedad de alimentos? …….. No Aplica……..	1 2 3 4 5 6 7 99
5.6	¿Qué otros servicios/consejería **para su recién nacido** recibió durante las visitas domiciliarias realizadas después del parto? ***[Registre todas las respuestas dadas por la encuestada. No lea las posibles respuestas.]***	Registro del nacimiento…… Examen físico del recién nacido…… Vacunación del recién nacido…… Otro [especifique]:_____ No sabe/no responde …….. No Aplica ……	1 2 3 8 88 99
5.7	¿Qué otros servicios/consejería **para Ud. misma** recibió durante las visitas domiciliarias realizadas después del parto? ***[Registre todas las respuestas dadas por la encuestada. No lea las posibles respuestas.]***	Examen físico para detectar complicaciones maternas Entrega de Vitamina A …….. Planificación Familiar…… Otro [especifique]: _____ No sabe/no responde …….. No Aplica ……..	1 2 3 8 88 99
Señales de peligro para la mujer que dio a luz recientemente (Puérpera) y el recién nacido			
5.8	En su opinión, ¿Qué síntomas le harían pensar que un recién nacido está enfermo y debería recibir inmediatamente atención en un establecimiento de salud? ***[Registre todas las respuestas dadas por la encuestada. No lea las posibles respuestas.]*** *Repita la pregunta añadiendo* ***¿Y qué más?***	El bebé no llora inmediatamente después del nacimiento …..... Dificultades respiratorias, respiración agitada…….. El bebé esta frío…… Fiebre..... Incapacidad o rechazo para lactar/conectarse al pecho..... Aletargamiento, inactividad..... Convulsiones …….. Pústulas o lesiones en la piel..... Pus o enrojecimiento del cordón umbilical ..... Otro [especifique]: _____ No sabe/no responde ……..	1 2 3 4 5 6 7 8 9 88 99

5.9	En su opinión, ¿Qué síntomas le harían pensar que una mujer que recién ha dado a luz está enferma y debería recibir inmediatamente atención en un establecimiento de salud? ***[Registre todas las respuestas dadas por la encuestada. No lea las posibles respuestas.]*** *Repita la pregunta añadiendo* ***¿Y qué más?***	Fiebre…… Dificultad para respirar…… Secreción vaginal de mal olor…… Hemorragia …… Dolor de cabeza / visión borrosa..... Dolor fuerte del vientre (la matriz)..... Desmayo / convulsiones…… Dolor en las pantorrillas…… Otro, Especifique _____ No sabe/no responde ……	1 2 3 4 5 6 7 8 88 99
¿La mujer conoce al menos 2 señales de peligro para el recién nacido? Sí____ No____			
¿La mujer conoce al menos 2 señales de peligro para una mujer que recientemente ha dado a luz? Sí____ No____			
Manejo de emergencias después del parto			
5.10	¿Tuvo Ud. un problema serio (o una emergencia) en casa después del parto de (NOMBRE), por el cual tuvo que buscar ayuda inmediata?	Sí..... No..... No Aplica.....	1 2→**5.17** 99
5.11	Si fue así, qué problema serio (situación de emergencia) tuvo?	_____ _____ No Aplica ……	 99
5.12	¿Acudió inmediatamente al establecimiento de salud?	Sí..... No..... No Aplica.....	1 2 99
5.13	***[Nota: Vea la P. 5.4 si recibió visita domiciliaria postparto haga las siguientes preguntas; caso contrario, pase a P. 5.17]*** La persona que le atendió, ¿Le dijo que Ud. tenía un problema relacionado al <u>post-parto</u> por el cual debería acudir a un establecimiento de salud?	Sí..... No..... No Aplica.....	1 2→**5.17** 99
5.14	La persona que le atendió, ¿le envió al establecimiento de salud por cualquier problema posterior al parto?	Sí..... No..... No Aplica.....	1 2→**5.17** 99
Referida al establecimiento de salud durante el período post-parto: Sí____ No____			
5.15	Si fue así, ¿Pudo Ud. ir al establecimiento de salud dentro del lapso de tiempo recomendado?	Sí..... No..... No Aplica.....	1 2 99
Acatamiento de la referencia post-parto: Sí____ No____			
5.16	¿Quién tomó la decisión de permitir (o no permitir) que Ud. acuda al establecimiento de salud? ***[Registre sólo una respuesta. No lea la lista de posibles respuestas.]***	Ella misma…… Esposo/compañero…… Ella y su esposo/compañero…… Jefe(a) de hogar..... …… La mujer de más edad en el hogar…… Otro (Especifique): _____ No sabe / no recuerda…… No Aplica.....……	1 2 3 4 5 8 9 99
5.17	Si Ud. quedara nuevamente embarazada y si tuviera algún problema, malestar o complicación **<u>durante el postparto</u>**, ¿Buscaría algún tipo de atención?	SÍ …… No …… No sabe	1 2 →**5.19** 9
5.18	¿A dónde acudiría **principalmente**?	Hospital/Maternidad del MSP …… Centro de Salud/Subcentro del MSP …… Hospital/Dispensario del IESS …….. Seguro Social Campesino …… Hospital/Dispensario de FF.AA. ó Policía …… Clínica/Médico privado ……	1 2 3 4 5 6

		Consultorio de empresa donde trabaja ……	7
		Partera ……..	8
		Otro, cuál? _____ ….	88
		No sabe/no responde ……..	99
Atención al recién nacido			
5.19	En su opinión, cuál es el lapso mínimo de tiempo después del parto en que una mujer y su bebé deberían recibir atención postparto (en su casa o en el establecimiento de salud)? ***[Registre sólo una respuesta. No lea las posibles respuestas.]***	1 o 2 días.....	1
		3-6 días.....	2
		1 o 2 semanas.....	3
		3-6 semanas……..	4
		Mas de 6 semanas…….	5
		No sabe/no responde ……..	9
5.20	Si quedara usted nuevamente embarazada y **<u>si su bebé</u>** tuviera algún problema, malestar o complicación, ¿Buscaría algún tipo de atención?	SÍ ……..	1
		No …….	2 →**5.22**
		No sabe	9
5.21	¿A dónde acudiría **principalmente**?	Hospital/Maternidad del MSP ……	1
		Centro de Salud/Subcentro del MSP ……	2
		Hospital/Dispensario del IESS ……..	3
		Seguro Social Campesino ……	4
		Hospital/Dispensario de FF.AA. ó Policía ……	5
		Clínica/Médico privado ……	6
		Consultorio de empresa donde trabaja ……	7
		Partera ……..	8
		Otro, cuál? _____ ….	88
		No sabe/no responde ……..	99
5.22	¿Qué sustancias aplicó en el cordón umbilical del bebé después del nacimiento? ***[Registre sólo una respuesta. No lea las alternativas.]***	Remedios tradicionales (infusiones de hierbas, ungüentos, emplasto).....	1
		Antisépticos (alcohol, agua oxigenada, etc.).....	2
		Otro, cuál: _____	8
		No sabe/ no recuerda.....	9
		No Aplica.....	99
5.23	En su opinión, ¿Qué debe hacer una madre para cuidar adecuadamente de su bebé después del nacimiento? ***[Registre todas las respuestas proporcionadas por la encuestada. No lea las posibles respuestas.]***	Secar al recién nacido inmediatamente después del parto.....	1
		Establecer contacto piel con piel con la madre.....	2
		Retrasar el baño del bebé por al menos 6 horas.....	3
		Cubrir la cabeza del bebé con un gorro o paño para mantenerlo abrigado.....	4
		Iniciar la lactancia materna dentro de la primera hora después del nacimiento.....	5
		Dar al recién nacido leche materna exclusivamente..	6
		No colocar nada en el cordón umbilical.....	7
		Lavarse las manos frecuentemente.....	8
		Otro, Especifique:_____	88
		No responde.....	99
¿Puede la madre identificar al menos 2 elementos de los cuidados del recién nacido? Sí____ No____			
Lactancia materna / Alimentación de infantes y niños pequeños			
5.24	¿En qué momento después del nacimiento de (NOMBRE) inició la lactancia materna? ***[Registre sólo una respuesta.]***	En la primera hora ……	1
		2-6 horas después del nacimiento ……	2
		Más de 6 horas después del nacimiento ……	3
		Nunca ……	4
		No sabe / no responde ……	9
5.25	¿A qué edad empezó a darle a su bebé alimentos o líquidos diferentes a la leche materna, como agua, papilla de maíz o cereal, etc.? ***<u>[Registre sólo una respuesta.]</u>***	Desde el nacimiento ……	1
		1 o 2 meses ……..	2
		3 -5 meses ……..	3
		Después de los 6 meses ……	4
		No sabe / no responde ……	9
5.26	**Entrevistador(a): Vea en P. 2.11** si el bebé tiene menos de 6 meses de edad. Si es así pregunte: ¿Durante las últimas 24 horas, (NOMBRE) ha sido	Sí.....	1
		No.....	2
		No aplica……..	99

	alimentado exclusivamente con leche materna? ***(Si el bebé tiene más de 6 meses de edad pase a la pregunta 6.1)***		

D. Indicadores Rapid Catch

VI. PLANIFICACIÓN FAMILIAR			
6.1	¿Está actualmente haciendo algo o utilizando algún método para postergar o evitar un embarazo?	Sí..... No.....	1 2 →**6.3**
6.2	¿Qué método está usando Ud. (o su esposo/ pareja)? ***No lea las opciones. Codifique solamente una respuesta. Si menciona más de un método, pregunte:*** ¿Cuál es el método principal que Ud. (o su esposo/ pareja) usa(n) para evitar o postergar el embarazo? ***Si la encuestada menciona tanto condones como el método de días fijos, codifique como "12" para el "método de días fijos".***	Esterilización femenina (ligadura)…..... Esterilización masculina (vasectomía)..... Píldora..... Dispositivo intra-uterino (T de cobre, espiral)..... Inyectables……..... Implantes (norplant)……..... Condón……..... Condón femenino..... Diafragma……..... Espuma/gel..... Método de lactancia y amenorrea..... Método de ritmo (días fijos) / collar del ciclo…… Retiro……..……..... Abstinencia (no tiene relaciones sexuales)…… Otro, Especifique:_____	1 2 3 4 5 6 7 8 9 10 11 12 13 14 88
	Usa un método anticonceptivo moderno? Sí____ No____		
6.3	En su opinión, ¿Cuánto tiempo debe una mujer dejar pasar entre dos partos?	Menos de 2 años …… 2-4 años …… 5 años y más …… Cuando ella quiera …….. No sabe/no responde ……	1 2 3 4 9
Lactancia materna/ Alimentación de infantes y niños pequeños			
6.4	Ahora me gustaría preguntarle sobre líquidos o alimentos que (NOMBRE) ingirió ayer durante el día o la noche. (NOMBRE) comió o bebió: ***Lea la lista de líquidos (de la A hasta la E, comenzando con "Leche materna").***	**SI NO NO SABE**	
	F. Leche materna?	1 2 9	
	G. Agua simple?	1 2 9	
	H. Fórmula infantil producida para el mercado?	1 2 9	
	I. Cualquier alimento fortificado para infantes y niños pequeños disponible en el mercado" [p. ej. Cerelac]?	1 2 9	
	J. Cualquier (otro) puré o papilla?	1 2 9	
6.5	Ahora quisiera preguntarle sobre (otros) líquidos o alimentos que (NOMBRE) ingirió ayer durante el día o la noche, incluso si fue en combinación con otras comidas. ¿(NOMBRE) bebió o comió:		
	GRUPO 1: LACTEOS	**SÍ NO NS**	
	Revise la pregunta.6.4 C – si la respuesta es afirmativa, seleccione "sí" aquí Y. Formula infantil producida para el mercado?	1 2 9	
	Z. Leche, ya sea enlatada, en polvo, o leche animal fresca?	1 2 9	
	AA. Queso, yogurt, u otros productos lácteos?	1 2 9	
6.6	**GROUPO 2: GRANOS**	**SÍ NO NS**	

	Revise la Preg. 6.4 D – si la respuesta es afirmativa, seleccione "sí" aquí BB. Cualquier alimento fortificado para infantes y niños pequeños disponible en el mercado (p. ej. Cerelac)?	1 2 9	
	Revise la preg.6.4 E – si la respuesta es afirmativa, seleccione "sí" aquí CC. Cualquier (otro) puré o papilla?	1 2 9	
	DD. Pan, arroz, fideos, u otros alimentos hechos con granos?	1 2 9	
	EE. Papas, melloco, oca, camote, yuca, o cualquier otro alimento hecho con raíces?	1 2 9	
6.7	**GROUPO 3: VEGETALES RICOS EN VITAMINA A**	**SÍ NO NS**	
	FF. Zambo, zanahoria, zapallo, que son de color amarillo o anaranjado por dentro?	1 2 9	
	GG. Algún vegetal que tenga hojas de color verde obscuro?	1 2 9	
	HH. Mangos, papayas, maduros (incluya cualquier otra fruta rica en vitamina A disponible a nivel local)?	1 2 9	
6.8	**GRUPO 4: OTRAS FRUTAS / VEGETALES**	**SÍ NO NS**	
	II. Cualquier otra fruta o vegetal, como naranjas, toronjas, piña, palmito?	1 2 9	
6.9	**GRUPO 5: HUEVOS**	**SÍ NO NS**	
	JJ. Huevos?	1 2 9	
6.10	**GRUPO 6: CARNE, AVES, PESCADO**	**SÍ NO NS**	
	KK. Hígado, riñón, corazón u otros órganos?	1 2 9	
	LL. Cualquier carne, como res, cerdo, borrego, cabra, pollo, cuy, conejo, o pato?	1 2 9	
	MM. Pescado fresco o seco, o mariscos?	1 2 9	
	NN. Larvas, caracoles, insectos, otros alimentos de proteínas pequeñas?	1 2 9	
6.11	**GRUPO 7: LEGUMBRES / NUECES**	**SÍ NO NS**	
	OO. Algún alimento hecho con fréjol, habas, arvejas, quínoa, chochos, lentejas, o nueces?	1 2 9	
6.12	**GRUPO 8: ACEITES/GRASAS**	**SÍ NO NS**	
	PP. Aceites, grasas, mantequilla, o comidas hechas con cualquiera de estos?	1 2 9	
	QQ. **Revise: ¿Cuántos grupos alimenticios (grupos 1-8 de la tabla anterior) tienen al menos un 'sí' señalado?**	**Número de Grupos** ☐	
6.13	**GRUPO 9: OTROS ALIMENTOS**	**SÍ NO NS**	
	RR. Té o café?	1 2 9	
	SS. Cualquier otro líquido?	1 2 9	
	TT. Cualquier alimento con azúcar, como chocolates, caramelos, dulces, masas, pasteles, o biscochos?	1 2 9	
	UU. Algún otro alimento sólido o blando?	1 2 9	
	¿Cuántas veces (NOMBRE) comió alimentos sólidos,		

	semisólidos, o blandos, sin contar los líquidos, ayer durante el día o la noche? ***ENCUESTADORA: Si la encuestada responde siete o más veces, registre "7" Los refrigerios y comidas pequeñas, como uno o dos bocados de la comida de la madre o hermana, no deben tomarse en cuenta.*** ***Los líquidos no cuentan para esta pregunta. No incluya sopas livianas, o caldo, papillas liquidas, o cualquier otro líquido. Use preguntas que ayuden a la encuestada a recordar todas las veces en que el niño comió ayer (en desayuno, la cena)***	NÚMERO DE VECES ☐ NO SABE …… ……. 9	
Suplementos con Vitamina A			
6.14	¿(NOMBRE) ha recibido alguna vez una dosis de Vitamina A (como cualquiera de éstas)?	SÍ …….. No …… No sabe	1 2 →**6.16** 9→**6.16**
6.15	¿(NOMBRE) ha recibido una dosis de Vitamina A en los últimos 6 meses?	SÍ …….. No …… No sabe	1 2 9
Vacunación infantil			
6.16	¿Tiene un carné o libreta de salud infantil de (Nombre) donde estén registradas las vacunas y dosis de Vitamina A (capsulas)? ***Si responde afirmativamente: ¿Puedo verla por favor?***	SÍ …….. No ……	1 2→**6.19**
6.17	***Copie las fechas del carné de vacunación para la Vitamina A, la primera y la tercera dosis de la vacuna PENTAVALENTE (DPT1- DPT3) y Sarampión (SRP).*** ***Si las vacunas no están registradas en el carné, llene 99 / 99 / 9999***	***VITAMINA A:*** ***DIA*** ☐☐ ***MES*** ☐☐ ***AÑO*** ☐☐☐☐ ***PENTAVALENTE (DPT 1ra. DOSIS)*** ***DIA*** ☐☐ ***MES*** ☐☐ ***AÑO*** ☐☐☐☐ ***PENTAVALENTE (DPT 3ra. DOSIS)*** ***DIA*** ☐☐ ***MES*** ☐☐ ***AÑO*** ☐☐☐☐ ***SARAMPION (SRP)*** ***DIA*** ☐☐ ***MES*** ☐☐ ***AÑO*** ☐☐☐☐	
6.18	¿(NOMBRE) recibió alguna vacuna que no esté registrada en este carné, incluyendo vacunas recibidas durante campañas de vacunación?	SÍ …….. No …… No sabe	1→**6.22** 2→**6.22** 9→**6.22**
6.19	***Si la madre no tiene el carné.*** Pregunte: ¿(NOMBRE) recibió la vacuna Pentavalente DPT (Difteria, Tosferina, Tétanos) es decir, una inyección en el muslo, que a veces se da al mismo tiempo que las gotitas contra la polio?	SÍ …….. No …… No sabe	1 2→**6.21** 9→**6.21**
6.20	Cuántas veces?	NUMERO DE VECES ..... ☐	
6.21	¿(NOMBRE) alguna vez recibió una inyección en el brazo para prevenir el sarampión?	SÍ …….. No …… No sabe	1 2 9
Control de la diarrea			

6.22	¿Ha tenido (NOMBRE) diarrea en los últimos 15 días, incluido este día?	SÍ ………………………………………………………. No ……………………………………………………….	1 2→**6.24**
6.23	¿Le fue dado algo de lo siguiente para beber en algún momento desde que empezó a tener diarrea: **Lea las opciones en voz alta**	**SÍ** **NO** **NS**	
	a) Líquido hecho de un sobre especial llamado suero oral?	1 2 9	
	b) Líquido que viene ya empacado con suero oral?	1 2 9	
	c) Un suero casero recomendado por el gobierno?	1 2 9	
Infecciones Respiratorias Agudas / Neumonía			
6.24	¿Ha tenido (NOMBRE) tos que viene del pecho en algún momento durante los últimos 15 días?	SÍ ………………………………………………………. No ……………………………………………………….	1 2→**6.28**
6.25	¿Cuando (NOMBRE) tuvo tos, tuvo también dificultad para respirar o respiraba más rápido de lo normal, con respiraciones cortas y agitadas?	SÍ ………………………………………………………. No ……………………………………………………….	1 2
6.26	¿Buscó consejo o atención para la tos / respiración agitada?	SÍ ………………………………………………………. No ……………………………………………………….	1 2→**6.28**
6.27	¿Quién le proporcionó consejo o atención? ¿Alguna otra persona? ***(Registre todas las respuestas que mencione.)***	Doctor………………………………………………….. Enfermera…………………………………………….. Auxiliar de enfermería………………………………….. Promotor comunitario capacitado……………………… Otro, cuál? ______________________________ ……	1 2 3 4 8
Agua y salubridad			
6.28	¿Le dan algún tratamiento al agua para que sea segura para tomar?	Sí ………………………………………………………. No ……………………………………………………….	1 2→**6.30**
6.29	¿Qué es lo que usualmente hacen con el agua para que sea segura para tomar? ***Señale más de una respuesta sólo si se usan varios métodos conjuntamente de forma regular, por ejemplo, filtración con tela y cloro.***	Dejar que repose y se asiente/sedimentación…....... Cernirla a través de una tela………………………….... Hervirla……………………………………................. Añadir blanqueador / cloro………………………......... Filtro de agua (cerámica, arena, compuesto)…….... Desinfección solar (SODIS)..……………..................... Otro, cuál? ______________________________ .. No sabe……………………………..……..................	1 2 3 4 5 8 9
6.30	***PIDA VER Y OBSERVAR*** *¿Puede mostrarme dónde normalmente se lava las manos y qué usa para lavárselas?*	Dentro / cerca de un baño.. .... Dentro/cerca de la cocina/lugar para cocinar........... En otro lugar fuera de la casa................................ Ningún lugar específico.. No se otorga permiso para observar......................	1 2 3 4 6→**FIN**
6.31	***Únicamente observe: ¿Existe jabón o detergente, o algún agente de limpieza que se usa a nivel local?*** El objeto deberá estar en el lugar o ser traído por la encuestada en el lapso de un minuto. Si el objeto no está presente en el lapso de un minuto seleccione “nada”, incluso si es traído posteriormente.	Jabón.. Detergente... Ceniza .... Lodo/arena .... Nada .... Otro, cuál? __________________________________	1 2 3 4 5 8

¡MUCHAS GRACIAS POR SU VALIOSA COLABORACIÓN!

Nombre del Entrevistador: ______________________________

Nombre y firma del Supervisor después de verificar que la encuesta se completó:

____

Annex D: Sampling Frame

Cantón		Parroquia		Nº Zona selec.	Nº Sector selec.	Nº Enc.
COD.	Nombre	COD.	Nombre			
1	Latacunga	50	Latacunga (Periferia)	999	2	5
1		50	Latacunga (Periferia)	999	17	5
1		50	Latacunga (Periferia)	999	32	5
1		50	Latacunga (Periferia)	999	47	5
1		50	Latacunga (Periferia)	999	62	5
1		50	Latacunga (Periferia)	999	77	5
1		50	Latacunga (Periferia)	999	92	5
1		50	Latacunga (Periferia)	999	107	5
1		51	Aláquez	1	1	6
1		52	Belisario Quevedo	999	20	7
1		53	Guaytacama	1	2	5
1		53	Guaytacama	999	21	5
1		56	Mulaló	1	1	4
1		56	Mulaló	999	14	5
1		58	Poaló	999	9	7
1		59	Pastocalle	1	1	7
1		59	Pastocalle	999	31	7
1		61	Tanicuchi	1	1	6
1		61	Tanicuchi	921	1	6
1		62	Toacaso	1	1	5
1		62	Toacaso	999	4	4
6	Saquisili	50	Saquisili	1	1	5
6		50	Saquisili	1	11	5
6		50	Saquisili	999	10	5
6		50	Saquisili	999	23	4
6		51	Canchagua	1	1	6
6		53	Cochapamba	999	2	5
7	Sigchos	50	Sigchos	1	3	6
7		50	Sigchos	999	27	6
7		51	Chugchilan	999	7	4
7		51	Chugchilan	999	15	5
7		52	Isinliví	999	10	5
5	Salcedo	50	Salcedo	1	1	6
5		50	Salcedo	2	6	6
5		50	Salcedo	999	10	6
5		50	Salcedo	999	26	6
5		50	Salcedo	999	41	6
5		50	Salcedo	999	58	5
5		50	Salcedo	999	72	6
5		52	Cusubamba	1	3	8
5		53	Mulalillo	1	1	8
5		54	Mulliquindil	1	1	4
5		54	Mulliquindil	999	17	4
2	La Maná	50	La Maná	1	2	6
2		50	La Maná	2	5	6

2		50	La Maná	3	5	5
2		50	La Maná	4	5	6
2		50	La Maná	999	5	6
2		50	La Maná	999	16	5
2		50	La Maná	999	28	6
2		51	Guasaganda	999	10	5
3	Pangua	50	El Corazón	1	2	5
3		50	El Corazon	999	14	4
3		51	Moraspungo	1	2	8
3		51	Moraspungo	999	9	8
4	Pujili	50	Pujili	1	1	6
4		50	Pujili	2	8	6
4		50	Pujili	999	17	5
4		50	Pujili	999	34	5
4		50	Pujili	999	52	5
4		50	Pujili	999	68	5
4		50	Pujili	999	84	5
4		51	Angamarca	1	1	5
4		51	Angamarca	999	6	4
4		51	Angamarca	999	13	5
4		51	Angamarca	999	20	5
4		53	Guangaje	1	1	5
4		53	Guangaje	999	8	5
4		53	Guangaje	999	16	4
4		53	Guangaje	999	24	5
4		55	La Victoria	1	1	5
4		55	La Victoria	999	4	5
4		55	La Victoria	999	7	4
4		55	La Victoria	999	11	5
4		56	Pilalo	1	1	5
4		56	Pilaló	999	3	5
4		56	Pilaló	999	6	5
4		56	Pilaló	999	9	4
4		57	Tingo	1	2	4
4		57	Tingo	999	3	5
4		57	Tingo	999	7	5
4		57	Tingo	999	10	5
4		58	Zumbahua	1	2	5
4		58	Zumbahua	999	10	4
4		58	Zumbahua	999	22	5
4		58	Zumbahua	999	38	5
						456

Annex E: Training Guide and Schedule for KPC Survey Training

AGENDA FOR THE DATA COLLECTOR TRAINING WORKSHOP

VENUE: Auditorium of the Provincial Health Directorate of Cotopaxi (DPSC). Latacunga

DATES: April 14–15, 2010

OBJECTIVES:

a. To train 12 interviewers and 4 supervisors on administering household surveys to gather information on the quality of maternal and neonatal care.
b. To conduct pilot testing of the instrument.
c. To make adjustments to the instruments following the pilot testing.
d. To make plans for data collection along with their respective teams.

PARTICIPANTS:

DPSC: 2 trainers from Cross-Cultural Health
Consultant team: José Ordóñez and Rommel Andrade
CHS: Mario Chávez, Genny Fuentes and Daniel González
4 supervisors, 12 interviewees

1. AGENDA

DAY ONE		
TIME	**ACTIVITY**	**COORDINATOR**
08:30	Welcome and explanation of workshop objectives	Mario Chávez
09:00	Detailed technical explanation of the research	José Ordóñez
09:20	Importance of the survey technique and data integrity	Genny Fuentes
09:30	Document review and explanation	José Ordóñez
11:00	Refreshments	
11:30	Document review and explanation	José Ordóñez
13:30	**Lunch**	
14:30	Role-playing: Mock interview for the interviewers	Rommel Andrade
15:30	Observations, clarifications, adjustments	José Ordóñez
16:30	Planning for field testing	Rommel Andrade
17:00	Refreshments and Adjournment	
DAY TWO		
8:30	Field testing: Pilot administration of surveys in parishes around Latacunga canton: Yugsiloma, Colotoa, y Santa Bárbara	Rommel Andrade Mario Chávez, Daniel González, Genny Fuentes,
13:00	**Lunch**	

14:00	Revisions, final adjustments to the survey	Daniel González
15:00	Training on working with immunization card and child immunization booklet	Deifilia Landeta
15:30	Operation plan for the collection of surveys and the groups' census sector assignments	Rommel Andrade
16:00	Refreshments and Adjournment	

Annex F: Computer Tables for Each Question

Variable	Response Category	Cases	%
Geographic location			
1.2 Canton:	LATACUNGA	116	25,1
	LA MANÁ	47	10.2
	PANGUA	25	5.4
	PUJILÍ	153	33.1
	SALCEDO	65	14.1
	SAQUISILÍ	30	6.5
	SIGCHOS	26	5.6
	Total	**462**	**100.0**
1.3 City or parish:	LATACUNGA	41	8.9
	ALÁQUES (ALÁQUEZ)	6	1.3
	BELISARIO QUEVEDO (GUANAILIN)	7	1.5
	GUAITACAMA (GUAYTACAMA)	10	2.2
	MULALÓ	9	1.9
	POALÓ	7	1.5
	SAN JUAN DE PASTOCALLE	14	3.0
	TANICUCHÍ	13	2.8
	TOACASO	9	1.9
	LA MANÁ	41	8.9
	GUASAGANDA (CAB. EN GUASAGANDA)	6	1.3
	EL CORAZÓN	9	1.9
	MORASPUNGO	16	3.5
	PUJILÍ	38	8.2
	ANGAMARCA	19	4.1
	GUANGAJE	19	4.1
	LA VICTORIA	19	4.1
	PILALÓ	15	3.2
	TINGO	20	4.3
	ZUMBAHUA	23	5.0
	SAN MIGUEL	43	9.3
	CUSUBAMBA	8	1.7
	MULALILLO	8	1.7
	MULLIQUINDIL (SANTA ANA)	6	1.3
	SAQUISILÍ	19	4.1
	CANCHAGUA	6	1.3
	COCHAPAMBA	5	1.1
	SIGCHOS	12	2.6
	CHUGCHILLÁN	9	1.9
	ISINLIVÍ	5	1.1
	Total	**462**	**100.0**
Socio-demographic characteristics of the mother and child(ren) under 24 months of age			
2.1 Mother's age:	< 15 years	1	0.2
	15-19 years	75	16.2

	20-24 years	139	30.1
	25-29 years	88	19.0
	30-39 years	129	27.9
	40 or more years	30	6.5
	Total	**462**	**100.0**
2.2 What is the highest level of education you have attained?	No school	38	8.2
	Incomplete Primary School	77	16.7
	Completed Primary School	146	31.6
	Incomplete Secondary School	97	21.0
	Completed Secondary School	65	14.1
	Technical training	1	0.2
	University studies	38	8.2
	Total	**462**	**100.0**
2.3 How do you identity yourself?	Black	5	1.1
	Mulatta	7	1.5
	White	27	5.8
	Mestizo	292	63.2
	Indigenous	127	27.5
	Other	4	0.9
	Total	**462**	**100.0**
2.4 What is your main activity?	Housewife	245	53.0
	Peasant worker	101	21.9
	Housekeeper	36	7.8
	Public sector employee or worker	19	4.1
	Trader	20	4.3
	Industry worker	6	1.3
	Private employee	9	1.9
	Student	16	3.5
	Other	8	1.7
	No response	2	0.4
	Total	**462**	**100.0**
2.5 What is your current marital status?	Single	89	19.3
	Married	251	54.3
	Separated	7	1.5
	Widow	6	1.3
	Common-law marriage	108	23.4
	No response	1	0.2
	Total	**462**	**100.0**
2.6 During your life, how many children have you had who were born alive?	1	168	36.4
	2	108	23.4
	3	69	14.9
	4	47	10.2
	5	23	5.0
	6	10	2.2
	7	11	2.4
	8	9	1.9
	9	11	2.4
	10	2	0.4

	11	3	0.6
	12	1	0.2
	Total	**462**	**100.0**
2.7 How many living children do you currently have, even if they do not live with you?	1	170	36.8
	2	111	24.0
	3	72	15.6
	4	43	9.3
	5	22	4.8
	6	13	2.8
	7	9	1.9
	8	9	1.9
	9	9	1.9
	10	2	0.4
	11	1	0.2
	No response	1	0.2
	Total	**462**	**100.0**
2.9 Sex of the child:	Male	252	54.5
	Female	210	45.5
	Total	**462**	**100.0**
Age of child (in months)	< 1 month	18	3.9
	1 to 4 months	95	20.6
	5 to 9 months	112	24.2
	10 to 14 months	91	19.7
	15 to 19 months	79	17.1
	20 to 23 months	67	14.5
	Total	**462**	**100.0**
Care practices during pregnancy			
3.1 Did you have any antenatal checkups when you were pregnant with [NAME]?	Yes	423	91.6
	No	39	8.4
	Total	**462**	**100.0**
3.2 How many months pregnant were you when you had your first antenatal checkup?	< 2 months	204	44.2
	2-3 months	101	21.9
	4-5 months	76	16.5
	6-7 months	30	6.5
	8-9 months	11	2.4
	Not applicable	40	8.7
	Total	**462**	**100.0**
3.3 Where did you receive an antenatal checkup?	At home (her home)	7	1.5
	In the community	11	2.3
	In a health center	419	88.0
	Not applicable	39	8.2
	Total	**476**	**100.0**
3.4 From whom did you receive antenatal care at home?	Community health worker (CHW)	1	0.2
	Traditional birth attendant (TBA)	4	0.9
	Skilled health worker (doctor, nurse, skilled birth attendant)	4	0.9
	Other	0	0.0
	Not applicable	455	98.1
	Total	**464**	**100.0**

Antenatal service utilization at home or in the community			
3.5 How many times did you receive antenatal services at home during your last pregnancy?	2	1	0.2
	3	2	0.4
	4	2	0.4
	6	1	0.2
	7	1	0.2
	Not applicable	455	98.5
	Total	**462**	**100.0**
3.4 From whom did you receive antenatal care in the community?	Community health worker (CHW)	3	0.6
	Traditional birth attendant (TBA)	1	0.2
	Skilled health worker (doctor, nurse, skilled birth attendant)	8	1.7
	Other	0	0.0
	Not applicable	451	97.4
	Total	**463**	**100.0**
3.7 How many times did you receive antenatal care in the community during your last pregnancy?	1	1	0.2
	2	4	0.9
	3	3	0.6
	4	1	0.2
	7	1	0.2
	8	1	0.2
	Not applicable	451	97.6
	Total	**462**	**100.0**
37a. Did the woman have at least 4 antenatal visits in her home and/or community?	Yes	8	1.7
	No	7	1.5
	Not applicable	447	96.8
	Total	**462**	**100.0**
Antenatal service content at home or in the community			
3.8 At home or in the community, did you receive counseling about how to prepare for birth?	Yes	14	3.0
	No	3	0.6
	Not applicable	445	96.3
	Total	**462**	**100.0**
3.9 At home or in the community, did you receive counseling on danger signs that may indicate a pregnant woman is sick and needs to see a health care worker?	Yes	16	3.5
	No	1	0.2
	Not applicable	445	96.3
	Total	**462**	**100.0**
3.10 What other services/care did you receive?	Received folic acid	1	0.2
	Received iron	8	1.7
	Received the tetanus vaccine	7	1.4
	Received advice on eating more	6	1.2
	Physical examination to detect maternal complications	6	1.2
	Received counseling on danger signs	3	0.6
	Received counseling about preparation for birth	1	0.2
	Received counseling on newborn care	3	0.6
	Received information about family planning	1	0.2
	Other	2	0.4

	Not applicable	445	92.1
	Total	**483**	**100.0**
3.11 Did he/she tell you that you had problems related to your pregnancy and that it was necessary to go to the health center?	Yes	10	2.2
	No	7	1.5
	Not applicable	445	96.3
	Total	**462**	**100.0**
3.12 If yes, did they suggest that you go to a health center?	Yes	9	1.9
	Does not know/does not recall	1	0.2
	Not applicable	452	97.8
	Total	**462**	**100.0**
3.13 If yes, were you able to go to a health center within the recommended timeframe?	Yes	8	1.7
	No	1	0.2
	Not applicable	453	98.1
	Total	**462**	**100.0**
3.14 Who was the principal person who made the decision to go to a health center?	The patient herself	5	1.1
	Spouse/partner/companion	3	0.6
	Head of household	1	0.2
	Not applicable	453	98.1
	Total	**462**	**100.0**
Antenatal care in health facilities			
3.15 Do you know if there are any health centers that provide care for pregnant women, mothers and newborns in this parish or canton?	Yes	388	84.0
	No	33	7.1
	Does not know/does not recall	41	8.9
	Total	**462**	**100.0**
3.16 To which of these health facilities do you go most frequently?	MOH hospital / maternity unit	117	25.3
	MOH health center/sub-center	270	58.4
	EISS hospital/clinic	3	0.6
	Peasant social security	2	0.4
	Private Clinic/Doctor	20	4.3
	Other	4	0.9
	Not applicable	43	9.3
	Does not know/does not respond	3	0.6
	Total	**462**	**100.0**
3.17 Who provided the most antenatal checkups when you were pregnant with [NAME]?	Doctor	243	52.6
	Skilled birth attendant	154	33.3
	Nurse	14	3.0
	Auxiliary nurse	7	1.5
	Does not know/does not recall	1	0.2
	Not applicable	43	9.3
	Total	**462**	**100.0**
3.18 How many pregnancy checkups did you have in a health facility?	<2 checkups	49	10.6
	2-3 checkups	50	10.8
	4-5 checkups	121	26.2
	6-7 checkups	96	20.8
	8-9 checkups	79	17.1
	10 or more checkups	24	5.2
	Not applicable	43	9.3
	Total	**462**	**100.0**

3.19 Have you received any kind of counseling on how to take care of yourself during pregnancy, or how to recognize danger signs?	Yes	286	61.9
	No	125	27.1
	Does not know/does not recall	8	1.7
	Not applicable	43	9.3
	Total	**462**	**100.0**
3.20 Did you receive counseling on how to prepare for the delivery and birth of [NAME]?	Yes	252	54.5
	No	162	35.1
	Does not know/does not recall	5	1.1
	Not applicable	43	9.3
	Total	**462**	**100.0**
Did the woman have at least 4 antenatal visits to the health facility during her last pregnancy?	Yes	313	67.7
	No	106	22.9
	Not applicable	43	9.3
	Total	**462**	**100.0**
Did the woman have at least 4 combined antenatal visits between the community and the health facilities?	Yes	325	70.3
	No	91	19.7
	Not applicable	46	10.0
	Total	**462**	**100.0**
Tetanus immunization during pregnancy			
3.21 Did you receive an injection in your arm to prevent your baby from contracting tetanus?	Yes	352	76.2
	No	103	22.3
	Does not know/does not recall	7	1.5
	Total	**462**	**100.0**
3.22 How many times did you receive this injection?	0	1	0.2
	1	192	41.6
	2	120	26.0
	3	30	6.5
	4	8	1.7
	5	1	0.2
	Not applicable	110	23.8
	Total	**462**	**100.0**
3.23 Did you receive a tetanus toxoid injection at any time before your pregnancy with [NAME]?	Yes	167	36.1
	No	283	61.3
	Does not know/does not recall	12	2.6
	Total	**462**	**100.0**
3.24 Before your pregnancy with [NAME], how many times did you receive a tetanus injection?	0	3	0.6
	1	99	21.4
	2	47	10.2
	3	14	3.0
	4	2	0.4
	5	2	0.4
	Not applicable	295	63.9
	Total	**462**	**100.0**
Did the woman receive at least 2 tetanus toxoid injections before the birth of youngest child?	Yes	194	42.0
	No	268	58.0
	Total	**462**	**100.0**
Birth preparation			
3.25 What sort of preparations did you and your family do before the birth of	Identified the facility where the woman should go to give birth	96	11.1

[NAME]?	Identified a skilled provider or a TBA to assist with the birth	16	1.9
	Identified a place where she could go in case of an emergency	12	1.4
	Put money aside	141	16.4
	Prepared a suitcase for the delivery	347	40.3
	Identified a means of transportation	25	2.9
	Identified a blood donor	0	0.0
	Planned for support from family members	93	10.8
	Prepared documents	56	6.5
	No preparations were made	62	7.2
	Other	13	1.5
	Total	**861**	**100.0**
Did the woman implement at least 2 steps of birth preparedness?	Yes	262	56.7
	No	200	43.3
	Total	**462**	**100.0**
3.26 What should a woman and her family do to properly prepare themselves for the birth?	Identify the health facility she will give birth	110	11.6
	Identify a skilled provider or a TBA to attend the delivery	32	3.4
	Identify a place to go in case of an emergency	23	2.4
	Put money aside	180	18.9
	Prepare a suitcase for the delivery	325	34.1
	Identify a means of transportation	40	4.2
	Identify a blood donor	1	0.1
	Plan for support from family members	106	11.1
	Prepare documents	75	7.9
	No preparations should be made	35	3.7
	Other	25	2.6
	Total	**952**	**100.0**
Does the woman know at least 2 steps of birth preparedness?	Yes	313	67.7
	No	149	32.3
	Total	**462**	**100.0**
Danger signs for pregnant women			
3.27 What difficulties would she consider as danger signs for the mother or her child?	Severe abdominal pain	230	24.4
	Difficulty breathing	12	1.3
	Vaginal bleeding	242	25.6
	Temperature or fever	53	5.6
	Water breaks	24	2.5
	Swollen feet, hands, or face	78	8.3
	Lack of fetal/baby movement	39	4.1
	Fainting, loss of consciousness	34	3.6
	Headache/blurred vision	110	11.7
	Seizures	4	0.4
	Smelly vaginal discharge	33	3.5
	Other	32	3.4
	Does not know/does not respond	53	5.6
	Does not know/does not respond	**944**	**100.0**

The woman knows at least 2 danger signs for a pregnant woman?	Yes	290	62.8
	No	172	37.2
	Total	**462**	**100.0**
3.28 If you become pregnant again and have any problem during your pregnancy, would you seek out some form of care?	Yes	444	96.1
	No	18	3.9
	Total	**462**	**100.0**
3.29 Where is the main place you would go to?	MOH hospital / maternity unit	136	29.4
	MOH health center/sub-center	267	57.8
	Peasant social security	2	0.4
	Private Clinic/Doctor	34	7.4
	TBA	3	0.6
	Other	2	0.4
	Not applicable	18	3.9
	Total	**462**	**100.0**
Danger signs during birth			
4.1 What issues/symptoms do you think indicate danger for the mother or child and serve as an alert to seek immediate care from a skilled provider?	The baby is incorrectly positioned	133	17.3
	Absent or minimal fetal movement	57	7.4
	Prolonged labor	81	10.5
	Fever.	88	11.4
	Headache/blurred vision	93	12.1
	Seizures	12	1.6
	Difficulty breathing	17	2.2
	Retained placenta	62	8.1
	Loss of consciousness/fainting	47	6.1
	Hemorrhage	138	17.9
	Other	42	5.5
	Does not know/does not respond	71	9.2
	Total	**841**	**109.3**
The woman knows at least 2 danger signs that occur during delivery?	Yes	229	49.6
	No	233	50.4
	Total	**462**	**100.0**
Delivery assistance, location, and immediate post-partum practices			
4.2 Where did you give birth to [NAME]?	MOH hospital / maternity unit	236	51.1
	MOH health center/sub-center	44	9.5
	EISS hospital/clinic	2	0.4
	Police or armed forces hospital/clinic	1	0.2
	Private Clinic/Doctor	59	12.8
	At home with TBA	68	14.7
	At home with relative	34	7.4
	At home, unaccompanied	17	3.7
	Other	1	0.2
	Total	**462**	**100.0**
4.3 Who attended the delivery of [NAME]?	Doctor	280	60.6
	Skilled birth attendant	53	11.5
	Nurse	9	1.9
	TBA	69	14.9
	Relative	39	8.4

	Gave birth alone	11	2.4
	Other	1	0.2
	Total	**462**	**100.0**
Was the woman's last birth was attended by a skilled provider?	Yes	333	72.1
	No	129	27.9
	Total	**462**	**100.0**
4.4 Would she recommend to a friend or relative giving birth at the facility where you delivered [NAME]?	Yes	299	64.7
	No	40	8.7
	Does not know	3	0.6
	Not applicable	120	26.0
	Total	**462**	**100.0**
4.6 Which is the main reason you did not deliver [NAME] in a health facility?	Geographical barriers	21	4.5
	Did not have time to get there	28	6.1
	Did not have money to pay	7	1.5
	Facility health care is deficient	5	1.1
	Home delivery is customary/traditional	45	9.7
	Other	13	2.8
	Does not know/does not recall	1	0.2
	Not applicable	342	74.0
	Total	**462**	**100.0**
4.6 Was anything placed on the umbilical cord either before or after it was cut?	Yes	85	18.4
	No	28	6.1
	Does not know/does not recall	7	1.5
	Not applicable	342	74.0
	Total	**462**	**100.0**
4.7 What was the primary thing that was placed on the cord?	Traditional remedies	28	6.1
	Antiseptic	26	5.6
	Other	28	6.1
	Does not know/does not respond	3	0.6
	Not applicable	377	81.6
	Total	**462**	**100.0**
4.8 Was it dried immediately after birth, before the placenta was delivered?	Yes	112	24.2
	No	5	1.1
	Does not know/does not recall	3	0.6
	Not applicable	342	74.0
	Total	**462**	**100.0**
4.9 Was it wrapped in a cloth or towel?	Yes	119	25.8
	Does not know/does not recall	1	0.2
	Not applicable	342	74.0
	Total	**462**	**100.0**
4.10a How long after birth did breastfeed [NAME] for the first time?	As soon as he/she was born	192	41.6
	Immediately	264	57.1
	Other	4	0.9
	Does not recall	2	0.4
	Total	**462**	**100.0**
How many hours after delivery did you start breastfeeding?	<1 hour	59	12.8
	1-2 hours	55	11.9
	3-4 hours	35	7.6

	5-9 hours	20	4.3
	10-14 hours	8	1.7
	15-19 hours	1	0.2
	20 or more hours	14	3.0
	Not applicable	270	58.4
	Total	**462**	**100.0**
How many days after delivery did you start breastfeeding?	No days	133	28.8
	1 day	15	3.2
	2 days	26	5.6
	3 days or more	18	3.9
	Not applicable	270	58.4
	Total	**462**	**100.0**
Did the baby nurse within one hour of birth?	Yes	283	61.3
	No	179	38.7
	Total	**462**	**100.0**
Was essential newborn care provided? (dried/warm; cord care; BF within one hour)	Yes	111	24.0
	No	9	1.9
	Not applicable	342	74.0
	Total	**462**	**100.0**
4.11 Did any serious problems occur during labor that made it necessary to seek out immediate care? The woman gave birth at home.	Yes	10	2.2
	No	109	23.6
	Does not know/does not respond	1	0.2
	Not applicable	342	74.0
	Total	**462**	**100.0**
4.12 If yes, what serious problem did you have?	Breast surgery	1	0.2
	Skin conditions	1	0.2
	Placental retention	4	0.9
	Jaundice	1	0.2
	Severe abdominal pain	2	0.4
	Newborn fails to cry	1	0.2
	Not applicable	452	97.8
	Total	**462**	**100.0**
4.13 Were you told that there was a problem related to the delivery that made it necessary for you to visit a health facility?	Yes	5	1.1
	No	4	0.9
	Not applicable	453	98.1
	Total	**462**	**100.0**
4.14 During your home birth, were you told to go to a health center because of a problem related to the delivery?	Yes	6	1.3
	No	4	0.9
	Not applicable	452	97.8
	Total	**462**	**100.0**
Referral to health facility during the delivery	Yes	6	1.3
	No	4	0.9
	Not applicable	452	97.8
	Total	**462**	**100.0**
4.15 Were you at a health facility to receive care for this problem?	Yes	6	1.3
	No	4	0.9
	Not applicable	452	97.8
	Total	**462**	**100.0**

Follow-through with referral	Yes	5	1.1
	No	1	0.2
	Not applicable	456	98.7
	Total	**462**	**100.0**
4.16 If yes, tell me which things helped you to reach the health facility?	Received immediate access to transportation	3	0.6
	Assistance from spouse or other family member	2	0.4
	Availability of a health promotor	1	0.2
	Other	456	98.7
Total responses		**462**	**100.0**
4.17 In the end, were you able to reach the health facility?	Yes	6	1.3
	Not applicable	456	98.7
	Total	**462**	**100.0**
4.18 Who made the decision to allow you (or not allow you) to go to the health facility?	The patient herself	3	0.6
	Spouse/companion	2	0.4
	Other	1	0.2
	Not applicable	456	98.7
	Total	**462**	**100.0**
4.19 If you become pregnant again and have any problem during your pregnancy, would you seek out some form of care?	Yes	442	95.7
	No	20	4.3
	Total	**462**	**100.0**
4.20 Where is the main place you would go to?	MOH hospital / maternity unit	159	34.4
	MOH health center/sub-center	244	52.8
	Peasant social security	2	0.4
	Private Clinic/Doctor	32	6.9
	TBA	4	0.9
	Not applicable	20	4.3
	Does not know/does not respond	1	0.2
	Total	**462**	**100.0**
Use of postnatal care services			
5.1 After giving birth in the facility center, did you stay there for at least 2 days?	Yes	275	59.5
	No	67	14.5
	Not applicable	120	26.0
	Total	**462**	**100.0**
5.2 Did you receive post-partum care or counseling from a health provider within two days of delivery?	Yes	290	62.8
	No	172	37.2
	Total	**462**	**100.0**
5.3 Did you receive postpartum care or counseling in the first week in your home, community, or the health facility?	Yes	25	5.4
	No	147	31.8
	Not applicable	290	62.8
	Total	**462**	**100.0**
5.4 If yes, where did you receive postpartum care/counseling?	Home visit by a TBA	29	6.3
	Home visit by a CHW	7	1.5
	Home visit by a skilled health provider	10	2.2
	Health center/hospital	231	50.0
	Private health clinic	39	8.4
	Not applicable	147	31.8

	Total	**463**	**100.0**
Received postpartum care within 2 days of delivery	Yes	290	62.8
	No	170	36.8
	Not applicable	2	0.4
	Total	**462**	**100.0**
Content/quality of postpartum home visits			
5.5 During the postpartum home visit, did you receive counseling on the following topics:	What you should do to care for the baby	20	3.7
	Breastfeeding and nutrition for the baby	24	4.4
	Care and danger signs in the newborn	18	3.3
	Care and danger signs in the new mother	16	2.9
	Family planning	13	2.4
	Postpartum visits to the health center	9	1.7
	The importance of eating more and better	29	5.3
	Not applicable	416	76.3
Total responses		**545**	**100.0**
5.6 What other services/counseling for your newborn did you receive during your postpartum home visits?	Birth registration	24	4.9
	Newborn physical exam	10	2.0
	Newborn immunization	33	6.7
	Other	1	0.2
	Does not know/does not respond	7	1.4
	Not applicable	416	84.7
Total responses		**491**	**100.0**
5.7 What other services/counseling did you yourself receive during your postnatal home visits?	Physical examination to detect maternal complications	8	1.7
	Vitamin A distribution	9	1.9
	Family planning	19	4.0
	Other	2	0.4
	Does not know/does not respond	18	3.8
	Not applicable	416	88.1
Total responses		**472**	**100.0**
Danger signs for the newly-postpartum woman and newborn			
5.8 What symptoms would make you think that a newborn is sick and should receive immediate care in a health facility?	Newborn does not cry immediately after birth	114	12.2
	Difficulty breathing, rapid respiration	93	9.9
	Newborn is cold	44	4.7
	Fever.	277	29.6
	Inability or refusal to breastfeed/latch on	191	20.4
	Lethargy/lack of activity	24	2.6
	Seizures	7	0.7
	Pustules or sores on the skin	8	0.9
	Pus or inflammation of umbilical cord	25	2.7
	Other	132	14.1
	Does not know/does not respond	20	2.1
Total responses		**935**	**100.0**
5.9 What symptoms would make you think that a newly-postpartum woman is sick and should receive immediate care in a health facility?	Fever	179	19.2
	Difficulty breathing	15	1.6
	Smelly vaginal discharge	52	5.6
	Hemorrhage	172	18.5
	Headache/blurred vision	184	19.7

	Severe pain in the lower abdomen (uterus)	177	19.0
	Fainting/seizures	43	4.6
	Calf pain	7	0.8
	Other	48	5.2
	Does not know/does not respond	55	5.9
Total responses		**932**	**100.0**
The woman knows at least 2 danger signs for the newborn?	Yes	279	60.4
	No	183	39.6
	Total	**462**	**100.0**
The woman knows at least 2 danger signs for a newly-postpartum woman?	Yes	279	60.4
	No	183	39.6
	Total	**462**	**100.0**
Handling postpartum emergencies			
5.10 Did any serious postpartum problems occur at home that made it necessary to seek out immediate care?	Yes	45	9.7
	No	416	90.0
	Not applicable	1	0.2
	Total	**462**	**100.0**
5.11 If yes, which serious problem (emergency situation) did you experience?	HEMORRHAGE	7	1.5
	TUMOR-RELATED PROBLEMS	2	0.4
	VOMITING	2	0.4
	FEVER/CHILLS	4	0.9
	POST-CAESARIAN INFECTION	2	0.4
	BODILY SHIVERING, NAUSEA, AND SWEATING	1	0.2
	"SOBREPARTO" (TRADITIONAL POSTPARTUM ILLNESS WITH FEVER AND SHAKING)	2	0.4
	NEWBORN NOT NURSING	2	0.4
	LOSING VISION	1	0.2
	MASTITIS	4	0.9
	LOWER ADBOMINAL PAIN PROBLEMS	7	1.5
	SWELLING OF THE VAGINAL CANAL	1	0.2
	NOT ABLE TO EAT	1	0.2
	LOW BLOOD-SUGAR	1	0.2
	THE CHILD'S NOSE IS CLOGGED, CAN NOT BREATH AND REMAINS UNCONSCIOUS	1	0.2
	WASTE IN THE ABDOMEN	1	0.2
	HEADACHE	2	0.4
	INFECTED LACERATION	1	0.2
	BLADDER OPERATION	1	0.2
	ANEMIA	1	0.2
	LOWER ADBOMINAL PAIN	1	0.2
	Not applicable	417	90.3
	Total	**462**	**100.0**
5.12 Did you immediately go to a health facility?	Yes	42	9.1
	No	3	0.6
	Not applicable	417	90.3

	Total	**462**	**100.0**
5.13 Were you told that there was a postpartum problem that made it necessary for you to visit a health facility? Received a home visit.	Yes	2	0.4
	No	4	0.9
	Not applicable	456	98.7
	Total	**462**	**100.0**
5.14 Were you sent to the health facility because of a postpartum problem?	Yes	1	0.2
	No	1	0.2
	Not applicable	460	99.6
	Total	**462**	**100.0**
Referred to health facility during postpartum period	Yes	1	0.2
	Not applicable	461	99.8
	Total	**462**	**100.0**
5.15 If yes, were you able to go to a health facility within the recommended timeframe?	Yes	1	0.2
	Not applicable	461	99.8
	Total	**462**	**100.0**
Follow-through with referral	Yes	1	0.2
	Not applicable	461	99.8
	Total	**462**	**100.0**
5.16 Who made the decision to allow you (or not allow you) to go to the health facility?	The patient herself	1	0.2
	Not applicable	461	99.8
	Total	**462**	**100.0**
5.17 If you become pregnant again and have a postpartum problem, will you seek out some form of care?	Yes	440	95.2
	No	22	4.8
	Total	**462**	**100.0**
5.18 Where is the main place you would go to?	MOH hospital / maternity unit	147	31.8
	MOH health center/sub-center	254	55.0
	Peasant social security	3	0.6
	Private Clinic/Doctor	32	6.9
	TBA	3	0.6
	Not applicable	22	4.8
	Does not know/does not respond	1	0.2
	Total	**462**	**100.0**
Newborn care			
5.19 In your opinion, what is the minimum time period after birth during which a woman and her baby should receive postnatal care?	1 or 2 days	116	25.1
	3-6 days	69	14.9
	1 or 2 weeks	63	13.6
	3-6 weeks	171	37.0
	More than 6 weeks	29	6.3
	Does not know/does not respond	14	3.0
	Total	**462**	**100.0**
5.20 If you became pregnant again, and your newborn experiences a problem, will you seek some form of care?	Yes	441	95.5
	No	15	3.2
	Does not know	6	1.3
	Total	**462**	**100.0**
5.21 Where is the main place you would go to?	MOH hospital / maternity unit	141	30.5
	MOH health center/sub-center	261	56.5
	EISS hospital/clinic	2	0.4
	Peasant social security	2	0.4

	Private Clinic/Doctor	32	6.9
	TBA	3	0.6
	Not applicable	15	3.2
	Does not know/does not respond	6	1.3
	Total	**462**	**100.0**
5.22 What substances did you use on the baby's umbilical cord after birth?	Traditional remedies	39	8.4
	Antiseptic	320	69.3
	Other	43	9.3
	Does not know/does not recall	60	13.0
	Total	**462**	**100.0**
5.23 In your opinion, what should a new mother do to properly care for her baby after birth?	Dry the newborn immediately after birth	48	4.7
	Establish skin-to-skin contact with the mother	27	2.7
	Delay the baby's first bath for at least 6 hours	60	5.9
	Cover the baby's head with a cap or cloth to keep him or her warm	271	26.6
	Initiate breastfeeding within the first hour of birth	115	11.3
	Exclusive breastfeeding	280	27.5
	Do not put anything on the umbilical cord	17	1.7
	Washing hands	120	11.8
	Other	66	6.5
	Does not know/does not respond	13	1.3
Total responses		**1017**	**100.0**
Can the mother identify at least 2 steps of newborn care?	Yes	352	76.2
	No	110	23.8
	Total	**462**	**100.0**
Breastfeeding/feeding infants and small children			
5.24 At what point after the birth of [NAME] did you initiate breastfeeding?	Within the first hour	272	58.9
	2-6 hours after birth	100	21.6
	More than 6 hours after birth	87	18.8
	Never	1	0.2
	Does not know/does not respond	2	0.4
	Total	**462**	**100.0**
5.25 At what age did you start to give your baby any food or liquids other than breast milk?	From birth	12	2.6
	1 or 2 months	8	1.7
	3 - 5 months	136	29.4
	After 6 months	182	39.4
	Does not know/does not respond	6	1.3
	Not applicable	118	25.5
	Total	**462**	**100.0**
5.26 Over the past 24 hours, has [NAME] been exclusively fed with breast milk?	Yes	124	26.8
	No	9	1.9
	Not applicable	329	71.2
	Total	**462**	**100.0**
Family planning			
6.1 Are you presently using any	Yes	268	58.0

contraceptive methods?	No	194	42.0
	Total	**462**	100.0
6.2 Which method are you (or your partner) using?	Female sterilization (tubal ligation)	28	6.1
	Male sterilization (vasectomy)	6	1.3
	The pill	70	15.2
	IUD	5	1.1
	Injectables	93	20.1
	Implants	2	0.4
	Condom	9	1.9
	Lactational Amenorrhea Method (LAM)	35	7.6
	Calendar-based methods	6	1.3
	Withdrawal	2	0.4
	Abstinence	7	1.5
	Other	5	1.1
	Not applicable	194	42.0
	Total	**462**	**100.0**
Uses a modern contraceptive method?	Yes	213	46.1
	No	55	11.9
	Not applicable	194	42.0
	Total	**462**	**100.0**
6.3 In your opinion, how long should a woman wait between births?	Less than 2 years	47	10.2
	2 - 4 years	179	38.7
	5 years or more	205	44.4
	As long as she wishes	18	3.9
	Does not know/does not respond	13	2.8
	Total	**462**	**100.0**
Breastfeeding/feeding infants and small children			
Liquids or foods that [NAME] ingested yesterday during day and night			
6.4a Breast milk?	Yes	389	84.2
	No	71	15.4
	Does not know	2	0.4
	Total	**462**	**100.0**
6.4b Plain water	Yes	256	55.4
	No	204	44.2
	Does not know	2	0.4
	Total	**462**	**100.0**
6.4c Commercially-produced infant formula?	Yes	93	20.1
	No	365	79.0
	Does not know	4	0.9
	Total	**462**	**100.0**
6.4d Any fortified food for infants and small children	Yes	81	17.5
	No	380	82.3
	Does not know	1	0.2
	Total	**462**	**100.0**
6.4e Any porridge or gruel?	Yes	221	47.8
	No	240	51.9
	Does not know	1	0.2
	Total	**462**	**100.0**
Liquids or foods that he ingested yesterday during day and night, including in combination with			

other foods			
6.5a MILK. Commercially-produced infant formula?	Yes	94	20.3
	No	364	78.8
	Does not know	4	0.9
	Total	**462**	**100.0**
6.5b Milk such as tinned, powdered, or fresh animal milk?	Yes	200	43.3
	No	261	56.5
	Does not know	1	0.2
	Total	**462**	**100.0**
6.5c Cheese, yogurt, or other milk products?	Yes	182	39.4
	No	275	59.5
	Does not know	5	1.1
	Total	**462**	**100.0**
6.6d GRAINS. Any fortified food for infants and small children	Yes	82	17.7
	No	379	82.0
	Does not know	1	0.2
	Total	**462**	**100.0**
6.6e Any porridge or gruel?	Yes	221	47.8
	No	240	51.9
	Does not know	1	0.2
	Total	**462**	**100.0**
6.6f Bread, rice, noodles, or other foods made from grains?	Yes	286	61.9
	No	175	37.9
	Does not know	1	0.2
	Total	**462**	**100.0**
6.6g White potatoes, white yams, manioc, cassava, or any other foods made from roots?	Yes	251	54.3
	No	209	45.2
	Does not know	2	0.4
	Total	**462**	**100.0**
6.7h VEGETABLES. Squash, carrots, pumpkin, etc.	Yes	223	48.3
	No	239	51.7
	Total	**462**	**100.0**
6.7i Any dark-green, leafy vegetables?	Yes	189	40.9
	No	272	58.9
	Does not know	1	0.2
	Total	**462**	**100.0**
6.7j Mango, papaya, plantain	Yes	207	44.8
	No	255	55.2
	Total	**462**	**100.0**
6.8k OTHER FRUITS. Any other fruits or vegetables like oranges, grapefruit or pineapple?	Yes	213	46.1
	No	248	53.7
	Does not know	1	0.2
	Total	**462**	**100.0**
6.9l EGGS. Eggs	Yes	237	51.3
	No	225	48.7
	Total	**462**	**100.0**
6.10m MEAT. Liver, kidney, heart or other organ meats?	Yes	100	21.6
	No	359	77.7
	Does not know	3	0.6

	Total	**462**	**100.0**
6.10n Any meat, such as beef, pork, lamb, goat, guinea pig, or rabbit?	Yes	243	52.6
	No	219	47.4
	Total	**462**	**100.0**
6.10o Fresh or dried fish or shellfish?	Yes	153	33.1
	No	307	66.5
	Does not know	2	0.4
	Total	**462**	**100.0**
6.10p Grubs, snails, insects, other nourishment?	Yes	18	3.9
	No	442	95.7
	Does not know	2	0.4
	Total	**462**	**100.0**
6.11q LEGUMES/NUTS. Any food made of black beans, broad beans, peas	Yes	199	43.1
	No	262	56.7
	Does not know	1	0.2
	Total	**462**	**100.0**
6.12r OILS/FATS. Oil, grease, butter	Yes	197	42.6
	No	265	57.4
	Total	**462**	**100.0**
6.12s Review: How many food groups have at least one "YES" marked?	0	117	25.3
	1	27	5.8
	2	13	2.8
	3	16	3.5
	4	31	6.7
	5	43	9.3
	6	51	11.0
	7	70	15.2
	8	94	20.3
	Total	**462**	**100.0**
6.13t OTHER FOODS. Tea or coffee?	Yes	183	39.6
	No	277	60.0
	Does not know	2	0.4
	Total	**462**	**100.0**
6.13u Any other liquids?	Yes	245	53.0
	No	216	46.8
	Does not know	1	0.2
	Total	**462**	**100.0**
6.13v Any foods with sugar?	Yes	143	31.0
	No	318	68.8
	Does not know	1	0.2
	Total	**462**	**100.0**
6.13w Any other solid or soft food?	Yes	189	40.9
	No	269	58.2
	Does not know	4	0.9
	Total	**462**	**100.0**
6.13 How many times did he/she eat solid, semi-solid, or soft foods other than liquids yesterday during the day or	0	121	26.2
	1	12	2.6
	2	46	10.0

at night?	3	170	36.8
	4	35	7.6
	5	22	4.8
	6	14	3.0
	7	16	3.5
	Does not know	26	5.6
	Total	**462**	**100.0**
Vitamin A supplementation			
6.14 Has (Name) ever received a vitamin A dose?	Yes	241	52.2
	No	213	46.1
	Does not know	8	1.7
	Total	**462**	**100.0**
6.15 Did he/she received a vitamin A dose within the last 6 months?	Yes	164	35.5
	No	63	13.6
	Does not know	14	3.0
	Not applicable	221	47.8
	Total	**462**	**100.0**
Child immunizations			
6.16 Do you have a child health booklet or card?	Yes	363	78.6
	No	98	21.2
	Not applicable	1	0.2
	Total	**462**	**100.0**
6.18 Has he/she received a vaccine that is not recorded in this card?	Yes	73	15.8
	No	291	63.0
	Not applicable	98	21.2
	Total	**462**	**100.0**
6.19 Has he/she received the DTP vaccine?	Yes	63	13.6
	No	30	6.5
	Does not know	5	1.1
	Not applicable	364	78.8
	Total	**462**	**100.0**
6.20 How many times	1	11	2.4
	2	28	6.1
	3	22	4.8
	4	2	0.4
	Not applicable	399	86.4
	Total	**462**	**100.0**
6.21 Did he/she ever receive an injection in the arm to prevent measles?	Yes	36	7.8
	No	51	11.0
	Does not know	11	2.4
	Not applicable	364	78.8
	Total	**462**	**100.0**
Control of diarrhea			
6.22 Has he/she had diarrhea in the last 15 days?	Yes	131	28.4
	No	331	71.6
	Total	**462**	**100.0**
6.23a He/she was given. A fluid called ORS made from a special packet?	Yes	35	7.6
	No	96	20.8

	Not applicable	331	71.6
	Total	**462**	**100.0**
6.23b A pre-packaged ORS liquid?	Yes	30	6.5
	No	99	21.4
	Not applicable	331	71.6
	Does not know	2	0.4
	Total	**462**	**100.0**
6.23c A government-recommended homemade solution?	Yes	19	4.1
	No	108	23.4
	Not applicable	331	71.6
	Does not know	4	0.9
	Total	**462**	**100.0**
ARIs/Pneumonia			
6.24 Has he/she had an illness with a cough that comes from the chest at any time in the last 15 days?	Yes	159	34.4
	No	303	65.6
	Total	**462**	**100.0**
6.25 When he/she coughed, did he also have difficulty breathing?	Yes	88	19.0
	No	71	15.4
	Not applicable	303	65.6
	Total	**462**	**100.0**
6.26 Did you seek counseling or care for the cough/rapid respiration?	Yes	106	22.9
	No	53	11.5
	Not applicable	303	65.6
	Total	**462**	**100.0**
6.27 Who gave you counseling or care?	Doctor	92	19.9
	Nurse	6	1.3
	Auxiliary nurse	3	0.6
	Trained community health promotor	2	0.4
	Other	4	0.9
	Not applicable	356	76.9
Total		**463**	**100.0**
Water and sanitation			
6.28 Do you treat your water in any way to make it safe for drinking?	Yes	307	66.5
	No	155	33.5
	Total	**462**	**100.0**
6.29 What do you usually do to the water to make it safe to drink?	Let it stand and settle/sedimentation	1	0.2
	Strain it through cloth	3	0.6
	Boil it	290	61.7
	Add bleach/chlorine	11	2.3
	Water filter (ceramic, sand)	3	0.6
	Solar disinfection	0	0.0
	Other	4	0.9
	Does not know/does not respond	3	0.6
	Not applicable	155	33.0
Total		**470**	**100.0**
6.30 Can you show me where you usually wash your hands and what you use to wash hands?	Inside / near toilet facility	140	30.3
	Inside/near kitchen / cooking place	84	18.2
	Elsewhere outside of the house	189	40.9
	No specific place	15	3.2

	Permission not granted to observe	34	7.4
	Total	**462**	**100.0**
6.31 Is there soap or detergent or any locally-used cleansing agent?	Soap	380	82.3
	Detergent	3	0.6
	Mud/sand	3	0.6
	None	40	8.7
	Other	2	0.4
	Not applicable	34	7.4
	Total	**462**	**100.0**

Annex G: Breakdown of Costs for KPC Survey

No.	DESCRIPTION	VALUE USD $
1.	External Technical Assistance	5.000,00
2.	Internal Technical Assistance (CHS Ecuador)	5.162,67
3.	Administrative Costs (lodging, board, communication)	2.612,51
4.	Inputs	175,70
5.	Travel Allowance	1.036,77
6.	Personal Services pollsters	3.960,12
7.	Professional Service Supervisors	2.116,88
8.	Transport Services	4.200,55
9.	Supplies	98,79
10.	Reproduction	666,96
	Total	**25.030,95**

Annex H: SPSS File (electronic only)

Child Survival and Health Grants Program Project Summary

Aug-27-2010

Center for Human Services (Ecuador)

General Project Information

Cooperative Agreement Number:	GHS-A-00-09-00008
CHS Headquarters Technical Backstop:	Kathleen Hill
CHS Headquarters Technical Backstop Backup:	Andrew Gall
Field Program Manager:	Mario , Chavez
Midterm Evaluator:	
Final Evaluator:	
Headquarter Financial Contact:	Andrew Gall
Project Dates:	9/30/2009 - 9/29/2013 (FY09)
Project Type:	Innovation
USAID Mission Contact:	Paulyna de Martinez
Project Web Site:	

Field Program Manager

Name:	Mario , Chavez (Field Program Manager)
Address:	CHS-Ecuador, Proyecto de Mejoramiento de la Atencion en Salud, HCI Avenida Colon E8-57 y Diego de Almagro, Edificio El Cisne, 5to Piso, Oficina C-D Quito , Pichincha Ecuador
Phone:	(+011-593) 22 222119
Fax:	(+011-593) 22 222120
E-mail:	mchavez@ecnet.ec
Skype Name:	

Alternate Field Contact

Name:	Jorge Hermida (Field Program Manager)
Address:	Avenida Colon E8-57 y Diego de Almagro, Edificio El Cisne, 5to Piso, Oficina C-D Avenida Colon E8-57 y Diego de Almagro, Edificio El Cisne, 5to Piso, Oficina C-D Quito , Pichincha Ecuador
Phone:	(+011-593) 22 222119
Fax:	(+011-593) 22 222120
E-mail:	jhermida@urc-chs.com
Skype Name:	

Grant Funding Information

USAID Funding: $1,749,934 **PVO Match:** $437,483

General Project Description

Cotopaxi, Ecuador EONC Project: Child Survival in the Ecuadorian Highlands

In the remote and mountainous province of Cotopaxi, maternal and neonatal mortality rates are among the highest in Ecuador: 102 maternal fatalities per 100,000 births and 8 neonatal fatalities per 1,000 births in 2008 . Many of these deaths could be prevented if women had access to quality essential and obstetric neonatal care (EONC). Health facilities often are unable to respond effectively to emergency situations along levels of care. Cultural barriers also exist: many indigenous women deliver at home with a traditional birth attendant (TBA) who is not trained to provide emergency care.

The Cotopaxi, Ecuador EONC Project's central aim is to reduce maternal and newborn mortality in the province of Cotopaxi. The project builds on work done by the USAID Health Care Improvement Project (formerly the Quality Assurance Project, 1990-2008) and supports the Ministry of Health's strategy to address the country's underlying causes of maternal and neonatal mortality.

The project is developing an integrated network of care that will provide women and their families with a continuum of maternal and neonatal services and establishing referral systems between private and public health facilities at all levels of care. To expand access to disadvantaged and isolated populations, the project seeks to bridge the gap between traditional, culture-based care and evidence-based clinical practices.

The CHS project team offers key services to:

- Develop a network linking community-based providers and health facilities to provide quality EONC services
- Increase community access to, demand for, and use of EONC network services
- Monitor the impact of evidence-based maternal-newborn intervention services
- Work with TBAs to enable them to identify danger signs and risk factors in mothers and newborns and refer them to a skilled-care facility
- Coordinate activities among TBAs, mobile community health teams, facilities that provide skilled services, community leaders, and non-government organizations working at the community level
- Strengthen the cultural acceptability of services at health care facilities
- Strengthen the capacity of health facilities to offer technical assistance to institutionalize quality improvement methods that will increase the quality and availability of EONC care.

Project Location

Latitude: -0.93 **Longitude:** -78.61

Project Location Types: Rural

Levels of Intervention:	District Hospital Health Center Health Post Level Home Community Other: Provincial Hospital
Province(s):	Cotopaxi
District(s):	Latacunga; Sigchos; Saquisilí; La Mana; Pangua; Pujili; Salcedo
Sub-District(s):	Matriz; Eloy Alfaro; Ignacio Flores, Juan Montalvo; San Buenaventura; Alaques; Belisario Quevedo; Guaitacama; Joséguango; Bajo Mulaló;11 De Noviembre; Poalo;San Juan de Pastocalle;Tanicuchi;Toacaso La Mana;Guasaganda; Pucayacu; Pangua; El Corazón; Moraspungo; Pinllopata; Ramón Campaña; Pujilí; Angamarca; Guangaje; La Victoria; Pilaló; Tingo; Zumbahua; Salcedo; San Miguel; Antonio José Holguín (Santa Lucía); Cusubamba; Mulalillo; Mulliquindil; Pansaleo; Saquisilí; Canchagua; Chantilín; Cochapamba; Sigchos; Chugchilán; Isinliví; Las Pampas; Palo Quemado

Operations Research Information

OR Project Title:	Role of Traditional Birth Attendants in Post Partum Care
Cost of OR Activities:	$199,180
Research Partner(s):	Ecuador Ministry of Public Health
OR Project Description:	**Brief contextual Background and Problem Statement:**

The Cotopaxi province in Ecuador, with 384,499 inhabitants, has a large rural population (67%) a third of which is Ecuadorian Indian (28%) and the majority of which is poor (90%), with poor access to and low utilization of evidence-based skilled maternal-newborn health care services. Maternal mortality rate reached 180 per 100,000 live births in 2007, and newborn mortality 12 per 1000 live births in 2006, among the highest in Ecuador's provinces. Almost half of all women in Cotopaxi and 71% of Indian women in the province delivered their babies at home in 2004, despite a national institutional delivery rate of 75% at the time. Most deliveries by Indian women are attended by a traditional birth attendant (TBA) with little or no formal training. Typically, the TBA attends the birth but does not routinely provide post-partum services to the woman or her newborn. In general, TBA services for newborns are very limited to non-existent. Home- or facility-based early post-partum services for women and their newborns in the Cotopaxi province are rare, due to numerous variables including a traditional 40 day post-partum confinement period; low rate of institutional delivery; geographic, cultural and economic barriers; and lack of national/regional post-partum care standards and advocacy. Even for women who do deliver in facilities, the woman and her newborn are typically discharged less than 24 hours after birth, with no systematic early post-partum follow of the mother and newborn at the facility. For women with recognized complications at the time of childbirth or during the post-partum period, coordination of care provided by TBAs and that provided by MOH and other institutional facilities is nonexistent for the most part.

It is well established that the majority of childbirth-related deaths for mothers and newborns occur in the immediate post-partum period and during the first week after birth. There is strong recent international evidence for the impact of community-based early post-partum intervention packages for reducing newborn mortality (Baqui et al, 2009; Bang et al, 2005; see references). Early post-partum intervention packages demonstrating outcome impact for newborns have usually included a combination of early post-partum home care by a trained health worker that includes counseling for household best practices, assessment for danger signs, prompt referral and in some cases home-based management of newborn illness or complications (e.g. sepsis, low-birth weight); facility-based post partum care strengthening; and with varying success, community-based BCC interventions.

Problem Statement: Despite strong international evidence for the impact of community-based early post-partum care for improved outcomes for newborns, the majority of women and their newborns in the Cotopaxi province do not benefit from early post-partum care. Poor household compliance with healthy maternal newborn care practices, lack of home- or facility-based early post-partum services, delayed recognition of danger signs and care seeking and a lack of linkages and effective referral mechanisms between TBA home care and formal health system services all contribute to increased vulnerability for women and newborns in the first week after birth in the Cotopaxi province.

Proposed intervention(s) to address the problem and the expected result:

The intervention to be evaluated by the proposed operations research will seek to meet four primary objectives:

1. Introduce early post-partum home based care (within first 1-3 days) by trained TBA's or skilled parish health center workers (EBAS* teams where functioning) that includes high-quality counseling for best routine practices, assessment for and recognition of danger signs and referral of complications identified in mothers and newborns

2. Improve household knowledge and adherence with best practices, including danger sign recognition for mothers and newborns and prompt care-seeking or follow-through with referral for recognized post-partum maternal newborn complications.

3. Strengthen linkages between parish health centers and TBA's in parish health center catchment areas to increase coverage, quality and coordination of home- and facility-based post partum services with an emphasis on improving effective referrals.

4. Improve quality of parish health center early post-partum services for women and newborns as measured by compliance with evidence-based standards of assessment and treatment care, and referral to county or provincial hospital when indicated for identified complications

* An EBAS team (Basic Health Care Team, by its Spanish name) is a new strategy of the Ministry of Health of Ecuador to expand coverage to underserved areas, consisting of an ambulatory team of a doctor, a nurse, a dentist, an auxiliary nurse who do home visits according to a pre-defined schedule.

Partners

Ecuador Ministry of Public Health (Collaborating Partner)	$0
Center for Population and Social Development Studies (CEPAR) (Subgrantee)	$5,000

Strategies

Social and Behavioral Change Strategies:	Community Mobilization Group interventions Mass media and small media
Health Services Access Strategies:	Addressing social barriers (i.e. gender, socio-cultural, etc) Implementation with a sub-population that the government has identified as poor and underserved Implementation in a geographic area that the government has identified as poor and underserved
Health Systems Strengthening:	Quality Assurance Supportive Supervision Developing/Helping to develop clinical protocols, procedures, case management guidelines Developing/Helping to develop job aids Monitoring health facility worker adherence with evidence-based guidelines Monitoring CHW adherence with evidence-based guidelines Referral-counterreferral system development for CHWs Community role in supervision of CHWs Community role in recruitment of CHWs Development of clinical record forms Review of clinical records (for quality assessment/feedback) Pharmaceutical management and logistics Community input on quality improvement
Strategies for Enabling Environment:	Stakeholder engagement and policy dialogue (local/state or national) Building capacity of communities/CBOs to advocate to leaders for health
Tools/Methodologies:	LQAS

Capacity Building

Local Partners:	Local Non-Government Organization (NGO) National Ministry of Health (MOH) Dist. Health System Health Facility Staff Other National Ministry Health CBOs Other CBOs Government sanctioned CHWs Non-government sanctioned CHWs TBAs Private Providers (Other Non-TBA)

Interventions & Components

Maternal & Newborn Care (100%)

Operational Plan Indicators

Number of People Trained in Maternal/Newborn Health
There is no data for this project for this operational plan indicator.
Number of People Trained in Child Health & Nutrition
There is no data for this project for this operational plan indicator.
Number of People Trained in Malaria Treatment or Prevention
There is no data for this project for this operational plan indicator.

Locations & Sub-Areas

Total Population: 384,499

Target Beneficiaries

	Ecuador - CHS - FY09
Children 0-59 months	23,590
Women 15-49 years	44,345
Beneficiaries Total	72,437

Rapid Catch Indicators: DIP Submission

Sample Type: 30 Cluster

Indicator	Numerator	Denominator	Percentage	Confidence Interval
Percentage of mothers with children age 0-23 months who received at least two Tetanus toxoid vaccinations before the birth of their youngest child	**194**	**462**	**42.0%**	**7.4**
Percentage of children age 0-23 months whose births were attended by skilled personnel	**333**	**462**	**72.1%**	**8.8**
Percentage of children age 0-5 months who were exclusively breastfed during the last 24 hours	**124**	**133**	**93.2%**	**17.0**
Percentage of children age 6-23 months who received a dose of Vitamin A in the last 6 months: card verified or mother's recall	**137**	**329**	**41.6%**	**8.8**
Percentage of children age 12-23 months who received a measles vaccination	**143**	**203**	**70.4%**	**13.1**
Percentage of children age 12-23 months who received DTP1 according to the vaccination card or mother's recall by the time of the survey	**185**	**203**	**91.1%**	**13.7**
Percentage of children age 12-23 months who received DTP3 according to the vaccination card or mother's recall by the time of the survey	**146**	**203**	**71.9%**	**13.2**
Percentage of children age 0-23 months with a febrile episode during the last two weeks who were treated with an effective anti-malarial drug within 24 hours after the fever began	**0**	**0**	**0.0%**	**0.0**
Percentage of children age 0-23 months with diarrhea in the last two weeks who received oral rehydration solution (ORS) and/or recommended home fluids	**71**	**131**	**54.2%**	**15.2**
Percentage of children age 0-23 months with chest-related cough and fast and/or difficult breathing in the last two weeks who were taken to an appropriate health provider	**61**	**88**	**69.3%**	**19.9**
Percentage of households of children age 0-23 months that treat water effectively	**300**	**462**	**64.9%**	**8.5**
Percentage of mothers of children age 0-23 months who live in households with soap at the place for hand washing	**383**	**462**	**82.9%**	**9.0**
Percentage of children age 0-23 months who slept under an insecticide-treated bednet (in malaria risk areas, where bednet use is effective) the previous night	**0**	**0**	**0.0%**	**0.0**
Percentage of children 0-23 months who are underweight (-2 SD for the median weight for age, according to the WHO/NCHS reference population)	**0**	**0**	**0.0%**	**0.0**
Percentage of infants and young children age 6-23 months fed according to a minimum of appropriate feeding practices	**85**	**329**	**25.8%**	**7.2**
Percentage of mothers of children age 0-23 months who had four or more antenatal visits when they were pregnant with the youngest child	**316**	**462**	**68.4%**	**8.7**
Percentage of mothers of children age 0-23 months who are using a modern contraceptive method	**213**	**462**	**46.1%**	**7.7**
Percentage of children age 0-23 months who received a post-natal visit from an appropriately trained health worker within two days after birth	**7**	**462**	**1.5%**	**1.6**

Rapid Catch Indicators: Mid-term

Rapid Catch Indicators: Final Evaluation

Rapid Catch Indicator Comments

Annex 12 – Map of Project Area

Annex 14a Poverty & Extreme Poverty (Cotopaxi Province)
DIP Section A.1: Technical Approach

Poverty & Extreme Poverty based on basic Unsatisfied Needs compared with Indigenous Presence (Cotopaxi Province)

	Sources: Population and Household Census (INEC 2001; SIDENPE0CODENPE 2004)															
	County/Parish	Indigenous Presence	Percentage of Extremely Poor persons	Number of Extremely poor persons	Percentage of poor persons(n/N)*100	Number of Poor Persons	Average of Population 01 - 08	Neonatal Deaths (INEC 03-08)		Maternal Deaths (INEC 03-08)	KMS	TIME	Type	# Criteria	Selection
No.	**Latacunga**		**33**	**47,211**	**64**	**92,515**		**103**							**22**
1	Latacunga (Matriz; Eloy Alfaro; Ignacio	5 - 19%	20.7	16,783	47	38,018	87,790	64	0.729	8				2	1
2	Alaques (Alaquez)	5 - 19%	39.5	1,933	88	4,282	5,308	5	0.942	2	12	20	2	2	
3	**Belisario Quevedo (Guanailin)**	20 - 39%	55.3	3,086	90	5,007	6,052	8	1.322		11	15	2	4	1
4	Guaitacama (Guaytacama)	5 - 19%	39.7	2,968	75	5,633	8,105	9	1.110		10	30	1	2	1
5	Joséguango Bajo	0 - 4%	36.3	983	81	2,183	2,937		0.000		13	23	2	1	
6	Mulaló	0 - 4%	47.9	3,527	86	6,347	7,981	7	0.877	1	18	30	2	3	1
7	11 De Noviembre (Ilinchisi)	5 - 19%	36.3	654	79	1,424	1,953		0.000		8	20	1	0	
8	**Poalo**	20 - 39%	63.1	3,331	93	4,925	5,729	2	0.349	2	5	20	1 y 2	3	
9	**San Juan de Pastocalle**	5 - 19%	49.5	4,915	93	9,204	10,771	4	0.371		25	90	1	2	1
10	Tanicuchi	5 - 19%	37.6	4,137	83	9,157	11,937	1	0.084	1	5	20	1	2	
11	**Toacaso**	20 - 39%	70.2	4,894	91	6,335	7,558	3	0.397	3	12	45	1	3	1
	La Mana		**34**	**10,884**	**74**	**23,798**									
12	La Maná	0 - 4%	31.2	8,072	70	18,078	28,014	31	1.107	3	0			3	1
13	**Guasaganda (Cab. en Guasaganda**	5 - 19%	44.1	1,712	91	3,536	4,206		0.000	1	30	45	1 y 2	3	
14	**Pucayacu**	5 - 19%	45.8	1,100	91	2,184	2,603	1	0.384		42	75	1 y 2	2	
	Pangua		**52**	**10,296**	**89**	**17,759**									
15	**El Corazón**	20 - 39%	61.9	3,833	84	5,208	6,715	8	1.191	2	0			5	1
16	Moraspungo	0 - 4%	43.3	4,735	91	9,907	11,872	7	0.590	1	18	60	2 y 3	3	1
17	**Pinllopata**	0 - 4%	69.5	631	93	844	985	1	1.016		15	45	3	3	
18	**Ramón Campaña**	20 - 39%	60	1,097	99	1,800	1,981	2	1.010		22	105	2	4	1
	Pujilí		**65**	**39,470**	**88**	**53,317**									
19	**Pujilí**	40 - 59%	48.8	13,938	80	22,701	30,943	65	2.101	4	0			5	1
20	**Angamarca**	40 - 59%	87.2	4,272	97	4,739	5,310	2	0.377		105	210	2	4	1
21	**Guangaje**	> 80%	90.3	6,592	100	7,281	7,920	15	1.894	4	60	80	2	6	1
22	**La Victoria**	5 - 19%	51.4	1,443	91	2,555	3,043	2	0.657		6	15	2	2	
23	**Pilaló**	60 - 79%	75.9	1,415	93	1,734	2,022	2	0.989	1	65	90	1 y 2	5	1
24	**Tingo**	5 - 19%	37.1	1,270	75	2,559	3,713	3	0.808	3	36	60	1 y 2	1	
25	**Zumbahua**	> 80%	88.6	10,540	99	11,748	12,898	4	0.310					3	
	Salcedo		**46**	**23,596**	**80**	**40,986**									
26	**San Miguel**	40 - 59%	40.6	10,839	70	18,771	28,937	21	0.726	3	0			3	1
27	Antonio José Holguín (Santa Lucía)	0 - 4%	26.5	635	89	2,141	2,604		0.000		9	40	2	1	
28	**Cusubamba**	60 - 79%	71.8	5,101	96	6,819	7,701	12	1.558	4	30	110	1 y 2	7	1
29	**Mulalillo**	40 - 59%	58.2	3,370	90	5,234	6,275	4	0.637	3	11	50	1	4	1
30	Mulliquindil (Santa Ana)	5 - 19%	43.2	2,836	90	5,897	7,112	2	0.281		5	20	2 y 3	1	
31	Pansaleo	0 - 4%	29.4	815	77	2,124	3,002	2	0.666	2	4	15	1	1	
	Saquisilí		**60**	**12,379**	**84**	**17,518**									
32	**Saquisilí**	40 - 59%	42.3	4,642	72	7,917	11,914	30	2.518	2	12	30	2	4	1
33	**Canchagua**	60 - 79%	76.2	3,612	98	4,642	5,138	2	0.389		2	5	1	3	
34	Chantilín	0 - 4%	49.1	404	86	709	893		0.000		15	40	2 y 3	1	
35	**Cochapamba**	> 80%	87.2	3,721	100	4,250	4,626	6	1.297	1	20	80	2	6	1
	Sigchos		**73**	**15,217**	**94**	**19,445**									
36	**Sigchos**	5 - 19%	69.5	5,516	91	7,196	8,612	13	1.510	1	30	50	1 y 2	5	1
37	**Chugchilán**	> 80%	91.1	5,792	99	6,289	6,892	1	0.145	1	36	165	2	5	1
38	**Isinliví**	60 - 79%	75.7	2,507	96	3,192	3,589	1	0.279	3	40	165	2 y 3	5	1
39	**Las Pampas**	0 - 4%	48.7	1,000	88	1,808	2,227		0.000		130	300	3	2	
40	**Palo Quemado**	0 - 4%	37.9	402	91	960	1,150		0.000		125	280	3	2	

Targeted Parishes Selected following Indigenous Presence (40% and more) and/or extreme poverty (50% and more)

	Fuentes: Censo de Población y Vivienda - INEC Año: 2001 - SIISE; SIDENPE-CODENPE 2004							
	Cantón / Parroquia	Presencia indígena	Porcentaje pobres extremos (n/N)*100	Población Total INEC 2010	Infants: 0-11 months	Children: 12-59 months	Children: 0-59 months	Women: 15-49 years
No.	**Latacunga**							
3	Belisario Quevedo (Guanailin)	20 - 39%	55.3	6,759	144	541	685	1,603
8	Poalo	20 - 39%	63.1	6,398	105	606	711	1,556
11	Toacaso	20 - 39%	70.2	8,342	233	874	1,107	1,851
	Pangua							
15	El Corazón	20 - 39%	61.9	7,501	175	692	867	1,579
17	Pinllopata	0 - 4%	69.5	1,100	26	123	149	199
18	Ramón Campaña	20 - 39%	60	2,213	43	225	268	412
	Pujilí							
19	Pujilí	40 - 59%	48.8	34,562	764	3,133	3,897	7,559
20	Angamarca	40 - 59%	87.2	5,931	186	699	885	1,153
21	Guangaje	> 80%	90.3	8,846	219	1,046	1,265	2,157
22	La Victoria	5 - 19%	51.4	3,398	68	268	336	693
23	Pilaló	60 - 79%	75.9	2,259	72	237	309	481
25	Zumbahua	> 80%	88.6	14,406	430	1,862	2,292	3,817
	Salcedo							
26	San Miguel	40 - 59%	40.6	32,321	560	2,528	3,088	7,931
28	Cusubamba	60 - 79%	71.8	8,601	193	859	1,052	1,629
29	Mulalillo	40 - 59%	58.2	7,009	154	600	754	1,504
	Saquisilí							
32	Saquisilí	40 - 59%	42.3	13,308	273	1,163	1,436	3,276
33	Canchagua	60 - 79%	76.2	5,738	154	580	734	1,325
35	Cochapamba	> 80%	87.2	5,167	128	543	671	1,344
	Sigchos							
36	Sigchos	5 - 19%	69.5	9,519	205	918	1,123	1,733
37	Chugchilán	> 80%	91.1	7,698	261	1,029	1,290	1,623
38	Isinliví	60 - 79%	75.7	4,009	94	488	582	700
	Total Population of the Targeted Parishes			**195,085**	**4,487**	**19,014**	**23,501**	**44,125**

gfd

91,127